

SENATE AGENDA

Friday, June 11, 2021 at 1:30 p.m.
Meeting to be held electronically via Zoom videoconference

Members of Senate may access the Zoom link through the OWL Senate site

Members of the public who wish to attend Senate are invited to
 contact the University Secretary at senate@uwo.ca

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| 1.0 | Land Acknowledgement | | |
| 2.0 | Minutes of the Meeting of May 14, 2021 | | Approval |
| 3.0 | Business Arising from the Minutes | | |
| 4.0 | Report of the President | | Information |

AGENDA

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|--------|---|--|----------|
| 5.0 | Report of the Operations / Agenda Committee (E. Chamberlain) | | |
| 5.1 | Senate Committee Terms of Reference Review: | | |
| 5.1(a) | Revisions to the Terms of Reference of the Operations/Agenda Committee | | Approval |
| 5.1(b) | Revisions to the Terms of Reference of the Nominating Committee | | Approval |
| 5.1(c) | Revisions to the Terms of Reference of the Senate Committee on University Planning | | Approval |
| 5.1(d) | Revisions to the Terms of Reference of the University Research Board | | Approval |
| 5.2 | Nominating Committee Membership | | Action |
| 6.0 | Report of the Nominating Committee (K. Yeung) | | |
| 6.1 | Selection Committee for the Associate Vice-President (AVP), Innovation & Strategic Partnerships | | Action |

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6.2	Subcommittee for Western Approved Micro-credentials (SWAM)	Action
7.0	Report of the Senate Committee on Academic Policy and Awards (J. Cuciurean) – no report for June 11, 2021	
8.0	Report of the Senate Committee on University Planning (M. Davison)	
8.1	Western University Strategic Plan, Towards Western at 150	Approval
9.0	Report of the University Research Board (L. Rigg)	
9.1	Status of the Rotman Institute of Philosophy	Approval
10.0	Report of the Academic Colleague	Information
11.0	Consent Agenda	Approval
11.1	Items from the Operations/Agenda Committee	
	11.1(a) Schedule of Senate and Senate Committee Meetings (2021-22)	Information
	11.1(b) Senate Membership – Vacancies Filled by Appointment	Information
11.2	Items from the Senate Committee on Academic Policy and Awards	
	11.2(a) School of Graduate and Postdoctoral Studies: Revisions to the Master of Management of Applied Science (Applied Science Spoke)	Approval
	11.2(b) Schulich School of Medicine & Dentistry:	
	11.2(b)(i) Revisions to the Admission Requirements for the Major in Medical Sciences	Approval
	11.2(b)(ii) Revisions to the Admission Requirements of the DDS Program (Changes to GPA Calculation due to COVID-19)	Approval
	11.2(c) Faculty of Science:	
	11.2(c)(i) Department of Applied Mathematics: Withdrawal of the Major in Theoretical Physics and the Minor in Mathematical and Numerical Methods	Approval
	11.2(c)(ii) Department of Applied Mathematics: Revisions to Admission and Program Requirements of Modules	Approval

11.2(c)(iii)	Department of Biology: Revisions to the Admission Requirements of Modules	Approval
11.2(c)(iv)	Department of Chemistry: Revisions to the Admission Requirements of Modules	Approval
11.2(c)(v)	Department of Computer Science: Revisions to the Admission Requirements of Modules	Approval
11.2(c)(vi)	Department of Earth Sciences: Revisions to the Admission and Program Requirements of Modules	Approval
11.2(c)(vii)	Department of Physics and Astronomy: Revisions to the Admission Requirements of Modules	Approval
11.2(c)(viii)	Department of Statistical and Actuarial Sciences: Revisions to the Admission and Program Requirements of Modules	Approval
11.2(c)(ix)	Revisions to the Admission Requirements for Modules offered in Integrated Science	Approval
11.2(c)(x)	Transfer of Modules from the Department of Applied Mathematics to the Department of Mathematics and the Department of Physics and Astronomy	Information
11.2(d) Faculty of Social Science:		
11.2(d)(i)	Introduction of a Social Science Internship Program and Internship Courses	Approval
11.2(d)(ii)	Department of Psychology: Changes to the First Year Course Offerings in Psychology and Revisions to the Admission and Program Requirements of Modules	Approval
11.2(e) Academic Policy Revisions:		
11.2(e)(i)	Revisions to the "Course Credit" Policy (Discovery Credits)	Approval
11.2(e)(ii)	Revisions to the "Gold Medals" Policy	Approval

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- 11.2(f) Articulation Agreements:
 - 11.2(f)(i) [Renewal of the Articulation Agreement for the Admission of Graduates of the Nutrition and Food Service Management Diploma Program at Centennial College into the Bachelor of Science \(Foods and Nutrition\) Program at Brescia University College](#) Approval
 - 11.2(f)(ii) [Renewal of the Articulation Agreement for the Admission of Graduates of the Food Nutrition Management Program at Fanshawe College into the Bachelor of Science \(Foods and Nutrition\) Program at Brescia University College](#) Approval
- 11.2(g) SUPR-U Report: [Cyclical Reviews of the Bachelor of Education Program and the Undergraduate Programs in Film Studies and Health Studies](#) Information
- 11.2(h) [Revised 2021-22 Sessional Dates – Faculty of Education and Ivey Business School \(HBA Program\)](#) Information
- 11.2(i) [New Scholarships and Awards](#) Information
- 11.3 Items from the Senate Committee on University Planning
 - 11.3(a) [Reports on Promotion, Tenure and Continuing Appointments](#) Information
- 11.4 Items from the University Research Board
 - 11.4(a) [Revisions to MAPP 7.14 – Policy and Procedures for Ethical Review of Research Involving Human Participants](#) Approval
- 11.5 Announcements and Communications
 - 11.5(a) Academic Administrative Appointments– no report for June 11, 2021
- 12.0 Items removed from Consent Agenda
- 13.0 Discussion and Question Period
- 14.0 New Business
- 15.0 Adjournment

ITEM 1.0 – Land Acknowledgement

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION/DISCUSSION

A land acknowledgement will be offered at the start of the Senate meeting.

ITEM 2.0 – Minutes of the Meeting of May 14, 2021

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION/DISCUSSION

Recommended: That the minutes of the meeting held on May 14, 2021 be approved as circulated.

MINUTES OF THE MEETING OF SENATE

May 14, 2021

The meeting was held at 1:30 p.m. via Zoom.

SENATORS:

L. Archibald	T. Granadillo	S. Morrison
P. Barmby	C. Harasym	A. Nelson
A. Baxter	L. Henderson	C. Nolan
J. Baxter	R. Heydon	A. Pahargarh
G. Belfry	H. Hill	P. Peddle
A. Borchert	V. Hocke	J. Nord
L. Briens	S. Hodgson	P. Peddle
D. Brou	D. Jeffrey	S. Pitel
S. Burke	T. Jenkyn	S. Powell
C. Burucúa	C. Jensen	S. Prichard
E. Chamberlain	G. Kelly	V. Radcliffe
L. Cipriano	R. Kennedy	G. Read
K. Coley	J. Kitz	L. Rigg
J. Compton	D. Kotsopoulos	S. Roland
J. Corrigan	J. Langille	G. Santos
J. Cuciurean	K. Lawless	E. Sapuridis
S. Datars Bere	W. Lehmann	A. Shepard
M. Davison	L. Lewis	V. Smye
R. Dekoter	J. Li	C. Steeves
J. Finegan	D. Malloy	P. Tarc
R. Flemming	M. McMurrin	G. Tigert
L. Frederking	L. Melnyk Gribble	J. Toswell
M. Garabedian	K. Mequanint	G. West
J. Garland	M. Milde	J. Wilson
L. Ghattas	L. Miller	K. Yeung
K. Gibbons	K. Miller	J. Yoo
G. Gifford	J. Minac	B.A. Younker

Observers: B. Baron, T. Belton, C. Bressette, R. Bgeginski, C. Brunette-Debassige, R. Chelladurai, J. Doerksen, B. MacDougall-Shackleton, M. McGlynn, M. Reesor, k. seanor

Land Acknowledgement

D. Jeffrey offered a Land Acknowledgement.

S.21-104 **MINUTES OF THE PREVIOUS MEETING**

The minutes of the meeting of April 16, 2021 were approved as circulated.

S.21-105 **REPORT OF THE PRESIDENT**

The President's Report, distributed with the agenda, contained information on the following topics: COVID-19 update, accolades, and leadership updates.

The President additionally commented on the following items:

- The searches for Provost and Associate Vice-President (Equity, Diversity & Inclusion) are underway,
- The Equity, Diversity and Inclusion Advisory Council conducted its first meeting this week,
- Western University ranked in the top 5% of University participants in sustainability,
- COVID-19 update: Middlesex-London Health Unit approved a vaccine site at Western for staff, students and faculty members. Testing center will continue to operate in the fall term. Ventilation and air exchange filters have been modified to higher standards of safety,
- Discussions are ongoing with Middlesex-London Health Unit, faculty members and health advisors regarding fall term plans,
- Immigration and travel policies for international students continue to be adjusted by the Federal government in response to the ongoing COVID-19 pandemic. The government announced conditional offers of admission will delay students' applications processing times.

A Senator inquired on the requirements and accommodations of student attendance if in-person instruction is to resume in the fall.

The President responded that the expectation is for students to attend in person if classes are offered in this format, unless there is a need for accommodation.

S.21-106 **ITEM 4.1 – Draft Strategic Plan**

The President thanked the Strategic Planning Steering committee members for their hard work on the plan. The three themes of the plan were presented:

1. Greater Impact
2. People, Community, and Culture
3. Western's Place in the World

Senators who are members of the Strategic Planning Steering Committee were invited to provide comments on their experience of serving on the committee. Members noted the consultative process involved high engagement and participation and was inclusive of the Western community. It was noted that the work of the subcommittees established to work in parallel to the strategic planning committee was valuable to the consultation process.

A Senator inquired on how to promote EDI training and pedagogy within the departments and programs at Western.

The President responded that continuous recommendation to participate in training is a more favourable approach to mandating the training.

Senators were invited to provide any further input, questions or observations regarding the draft Strategic Plan to the President or T. Rice (Executive Director (Strategic Brand and Marketing)), to be presented to the Strategic Planning Steering Committee. The President advised the draft is also available on the web (<https://president.uwo.ca/strategic-planning-20-21/planning.html>)

S.21-107 **UNANIMOUS CONSENT AGENDA**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That the items listed in the Consent Agenda, except for ITEM 5.3(f) and 5.4(a), be approved or received for information by the Senate by unanimous consent.

CARRIED

CONSENT AGENDA ITEMS

REPORT FROM THE OPERATIONS/AGENDA COMMITTEE

S.21-108 **ITEM 5.1(a) – Don Wright Faculty of Music: Amendment of the Faculty Council Constitution**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective May 14, 2021, the Don Wright Faculty of Music Council Constitution be revised as shown.

CARRIED

S.21-109 **Information Items Reported by the Operations/Agenda Committee on Unanimous Consent**

- ITEM 5.1(b) – Senate Membership – General Community Member Information
- ITEM 5.1(c) – Appointment of Officers of Convocation

S.21-110 **REPORT FROM THE NOMINATING COMMITTEE**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

Jonathan De Souza was acclaimed to complete the term of Paul Frehner (June 30, 2022) due to a sabbatical leave, but his term end date was indicated as June 30, 2023. A correction is required to Jonathan De Souza's term end date, to June 20, 2022.

CARRIED

REPORT FROM THE SENATE COMMITTEE ON ACADEMIC POLICY AND AWARDS

S.21-111 **ITEM 5.3(a)(i) – School of Graduate and Postdoctoral Studies: Revisions to the PhD in French Studies**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the PhD in French Studies be revised as shown.

CARRIED

S.21-112 **ITEM 5.3(a)(ii) – School of Graduate and Postdoctoral Studies: Introduction of a field in “Process Control and Safety” in the Master of Engineering (MEng) in Chemical and Biochemical Engineering**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, a field in “Process Control and Safety” be introduced in the Master of Engineering (MEng) in Chemical and Biochemical Engineering.

CARRIED

S.21-113 **ITEM 5.3(a)(iii) – School of Graduate and Postdoctoral Studies: Introduction of a Combined Master of Engineering (MEng) and Graduate Diploma (GDip) in Engineering Leadership and Innovation Option to the Master of Engineering Degree Programs**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, a Combined Master of Engineering and Graduate Diploma (Engineering Leadership and Innovation) option be added to the Master of Engineering degree programs.

CARRIED

S.21-114 **ITEM 5.3(a)(iv) – School of Graduate and Postdoctoral Studies: Introduction of fields in “Sport and Exercise Medicine” and “Upper Extremity Rehabilitation” in the Master of Clinical Science (MCIsc) in Advanced Health Care Practice**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021 the fields of “Sport and Exercise Medicine” and “Upper Extremity Rehabilitation” be introduced in the Master of Clinical Science (MCIsc) in Advanced Health Care Practice.

CARRIED

S.21-115 **ITEM 5.3(b)(i) – Schulich School of Medicine & Dentistry: Revisions to the Admission Requirements of the Modules in the Basic Medical Sciences Departments**

It was moved by G. Kelly, seconded by D. Kotsopoulos,
That effective September 1, 2021 the admission requirements for the modules listed below be revised as shown.

Honours Specialization in Medical Cell Biology
Major in Medical Cell Biology
Honours Specialization in Biochemistry
Honours Specialization in Biochemistry and Cancer Biology
Honours Specialization in Biochemistry and Cell Biology
Honours Specialization in Biochemistry and Pathology of Human Disease
Honours Specialization in Biochemistry of Infection and Immunity
Honours Specialization in Chemical Biology

Honours Specialization in Computational Biochemistry
Major in Biochemistry
Minor in Biochemistry

Honours Specialization in Epidemiology and Biostatistics
Major in Epidemiology and Biostatistics

Honours Specialization in Medical Biophysics (Biological Science Concentration)
Honours Specialization in Medical Biophysics (Clinical Physics Concentration)
Honours Specialization in Medical Biophysics (Medical Science Concentration)
Honours Specialization in Medical Biophysics (Physical Science Concentration)
Major in Medical Biophysics
Minor in Medical Biophysics

Honours Specialization in Microbiology and Immunology
Honours Specialization in Microbiology and Immunology with Pathology
Major in Microbiology and Immunology
Honours Specialization in Pathology
Honours Specialization in One Health
Major in Pathology

Honours Specialization in Pharmacology
Honours Specialization in Physiology
Honours Specialization in Physiology and Pharmacology
Major in Pharmacology
Major in Physiology
Honours Specialization in Interdisciplinary Medical Sciences
Specialization in Interdisciplinary Medical Sciences
Major in Interdisciplinary Medical Sciences
Honours Specialization in Neuroscience

CARRIED

S.21-116 **ITEM 5.3(b)(ii) – Schulich School of Medicine & Dentistry: Revisions to the Honours Specialization in Interdisciplinary Medical Sciences and the Weighted Average Chart in the “Admission to the Bachelor of Medical Sciences (BMSc) Program Years 3 and 4” Policy**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the Honours Specialization in Interdisciplinary Medical Sciences be revised as shown, and That the Weighted Average Chart in the “Admission to the Bachelor of Medical Sciences (BMSc) Program Years 3 and 4” policy be revised as shown.

CARRIED

S.21-117 **ITEM 5.3(b)(iii) – Schulich School of Medicine & Dentistry: Revisions to the Weighted Average Chart in the “Admission to the Bachelor of Medical Sciences (BMSc) Program Years 3 and 4” Policy (Honours Specialization in Biochemistry and Cell Biology, Honours Specialization in Biochemistry of Infection)**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the Weighted Average Chart in the “Admission to the Bachelor of Medical Sciences (BMSc) Program Years 3 and 4” Policy be revised as shown for the Honours Specialization in Biochemistry and Cell Biology and the Honours Specialization in Biochemistry of Infection and Immunity.

CARRIED

S.21-118 **ITEM 5.3(c) – Don Wright Faculty of Music: Revisions to the “Admission Requirements After Year II Music” for the Bachelor of Music (Honours) programs**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the "Admissions Requirements After Year II Music" for the Bachelor of Music (Honours) Composition, Bachelor of Music (Honours) Music Education, Bachelor of Music (Honours) Performance, and Bachelor of Music (Honours) Music Research be revised as shown for students admitted to the Common First Year in the Don Wright Faculty of Music.

CARRIED

S.21-119 **ITEM 5.3(d) – Faculty of Science: Introduction of a Subject Area in Numerical and Mathematical Methods**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, a subject area in Numerical and Mathematical Methods be introduced by the Faculty of Science and included in Category C for Breadth Requirements for Graduation.

CARRIED

S.21-120 **ITEM 5.3(e)(i) – Faculty of Social Science, Department of History: Revisions to the Honours Specialization, Specialization, Major and Minor in History, and the Minor in Public History**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the Honours Specialization, Specialization, Major and Minor in History, and the Minor in Public History be revised as shown.

CARRIED

S.21-121 **ITEM 5.3(e)(ii) – Faculty of Social Science: Revisions to the Progression Requirements (Overlapping Courses between Anthropology and Indigenous Studies Modules)**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the progression requirements for Social Science be revised as shown to include a policy on overlapping courses between Anthropology and Indigenous Studies modules.

CARRIED

S.21-122 **ITEM 5.3(g) – Report of the Subcommittee on Program Review – Graduate (SUPR-G): Cyclical Program Reviews of the Graduate Programs in Political Science and the Collaborative Specialization in Transitional Justice and Post-Conflict Resolution**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, the MA in Political Science be revised to:

- eliminate the MA thesis stream, and
- introduce a new course-based stream consisting of one course in research design and six course electives (3.0 credits), and

That effective September 1, 2021, the PhD in Political Science be revised to:

- require students to complete 13 graduate courses over the first two years of the program (6.5 credits), and
- to introduce a new milestone requirement for students to attend and participate in a mandatory publishing workshop during the summer of Year 1 (Term 3), and
- to rename the “Local Government” field to “Urban Political and Local Governance.

CARRIED

S.21-123 **Information Items Reported by the Senate Committee on Academic Policy and Awards**

The following items reported by the Senate Committee on Academic Policy and Awards were received for information by unanimous consent:

- ITEM 5.3(g) – SUPR-G Report: Cyclical Reviews of the Graduate Programs in Political Science and the Collaborative Specialization in Transitional Justice and Post-Conflict Resolution
- ITEM 5.3(h) – New Scholarships and Awards

ANNOUNCEMENTS AND COMMUNICATIONS

S.21-124 **Information Items Reported through Announcements and Communications on Unanimous Consent**

The following items were reported through Announcements and Communications and were received for information by unanimous consent:

- ITEM 5.5(a) – Election Results - Selection/Review Committee for the Vice-Provost (School of Graduate and Postdoctoral Studies)- Faculty Representation
- ITEM 5.5(b) – Academic Administrative Appointments

ITEMS REMOVED FROM CONSENT AGENDA

S.21-125 **ITEM 5.3(f) – Huron University College: Introduction of a Minor in Global Great Books**

A Senator submitted the following question in advance:

As someone who teaches in the program of Comparative Literature and Culture offered on Main Campus, I am wondering if Senate could have an explanation as to how the proposed Minor in Global Great Books differs from the ethos and practice of that longstanding program? Would Huron be interested in working out a partnership with the Department of Languages and Cultures (Faculty of Arts and Humanities) so that these programs could be better aligned to be complementary?

G. Read (Provost and Dean, Faculty of Arts and Social Science) responded that Global Great Books is a program already offered at Huron University College, as the Major in Global Great Books was previously approved by Senate. The proposed Minor will be established to address a desire by students, and it will be based on existing courses. In terms of differences, G. Read advised that literature is part of the program, but it is not the sole focus. Influential texts of the global community will be studied, and the material is substantially different from a comparative literature program.

G. Read noted that discussions regarding partnerships should be addressed to Dr. S. McDonald, Coordinator of the program.

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective September 1, 2021, a Minor in Global Great Books be introduced at Huron University College.

CARRIED

S.21-126 **ITEM 5.4(a) – Annual Report of the Working Group on Information Security (WGIS)**

A Senator submitted the following questions in advance:

a) What is the percentage takeup rate at this point for the Multi-Factor Authentication system? I'm worrying that alumni, students, faculty, staff might have very different takeup rates, and that the rate might vary by home faculty as well. I am concerned as a member of the Board of Governors to be sure that our alumni who use their Western email continue to be able to do so--but possibly they have high takeup rates and know what they are doing, more than I do as a faculty member.

R. Chelladurai, Associate Vice-President (Planning, Budgeting & Information Technology), responded that over 70% of the total active user group of Office 365 is currently enabled for MFA. The remaining 28% will be enabled by June 22. Within this group, current students are all now required to use MFA. Alumni are presently not required to use MFA. If the decision is made to enable Alumni for MFA, it will be at a future phase. Over a third of faculty and staff are currently MFA enabled. The goal is to have all staff and faculty members enabled by June 22. Data on faculty breakdown for MFA rates was unavailable prior to the Senate meeting, however, C. Couchman (Director, Cyber Security and Business Services) can retrieve the data if of interest.

b) We used in these reports to get the very scary numbers about how many phishing attacks and other cyberattacks were coming in the course of a year. This report indicates several million a day. Can these be identified or classified in a more coherent way (I like taxonomies). Are 50% of them efforts to extract money, for example? From national bad actors or individuals? Do we know the greatest source of these?

R. Chelladurai responded that Western's network is probed by cyber threats and phishing attacks on a daily basis, looking for vulnerabilities in the security infrastructure. The threats are a combination of threat groups, state-sponsored groups and individuals seeking to cause difficulties in the security infrastructure or financial gain. Western's automated detection processes are able to quickly identify and repel those probes without impacting the environment in a serious way. MFA has proven to be effective in limiting the number of accounts compromised through phishing, and discussions regarding training for faculty and staff are underway.

REPORT FROM THE OPERATIONS/AGENDA COMMITTEE

SS.21-127 **ITEM 7.1 – Nominating Committee Membership**

The following members were acclaimed to the Nominating Committee:

D. Laird (Schulich), for a term to June 30, 2023, and V. Jaremek (GRAD), for a term to June 30, 2022

SS.21-128 **ITEM 7.2 – Amendment of the Adopted Policies and Procedures of Senate**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That the Adopted Policies and Procedures of Senate be amended as shown effective July 1, 2021.

CARRIED

REPORT FROM THE NOMINATING COMMITTEE

S.21-129 **ITEM 8.1 – Academic Colleague**

The following member was acclaimed as the Academic Colleague:

P. Barmby (Sci), for a term to June 30, 2024.

S.21-130 **ITEM 8.2 – Senate Committee on Academic Policy and Awards (SCAPA)**

The following member was acclaimed to the Senate Committee on Academic Policy and Awards:

I. Namukasa (SGPS), for a term to June 30, 2023.

S.21-131 **ITEM 8.3 – Senate Review Board Academic (SRBA)**

The following members were acclaimed to the Senate Review Board Academic:

L. Dagnino (Schulich) (Chair), for a term to June 30, 2022.

M. Capretz (Engg), I. DeCoito (Edu), R. DeKoter (Schulich), D. Lacasse (Law), E. Lawson (AH),
E. Simpson (SS), V. N. Staroverov (Sci), J. Wilson (Ivey), for a term to June 30, 2023.

M. Fahmida, E. Gair, M. Patel, B. Sriharan, L. Stoyles, S. Zivkovic, (UNDG), for a term to June 30, 2022.

K. Gagnon, M. Glover, S. Kadish, S. Pellizzari, (GRAD), for a term to June 30, 2022

S.21-132 **ITEM 8.4 – Nominating Subcommittee to Nominate a Senator from the General Community**

G. Kelly was acclaimed to the Nominating Subcommittee to Nominate a Senator from the General Community following her nomination from the floor, for a term to June 30, 2023.

S.21-133 **ITEM 8.5 – Operations/Agenda Committee (OAC)**

The following member was acclaimed to the Operations/Agenda Committee:

S. Roland (Mus), for a term to June 30, 2022.

S.21-134 **ITEM 8.6 - Selection/Review Committee for the Vice-Provost (School of Graduate and Postdoctoral Studies)**

B. Tuinstra (GRAD) was acclaimed to the Selection/Review Committee for the Vice-Provost (School of Graduate and Postdoctoral Studies).

REPORT FROM THE SENATE COMMITTEE ON ACADEMIC POLICY AND AWARDS

S.21-135 **ITEM 9.1 – Introduction of a “General Definition of Western Approved Micro-credentials” Policy and Establishment of the SCAPA Subcommittee for Western Approved Micro-credentials (SWAM)**

It was moved by G. Kelly, seconded by D. Kotsopoulos,

That effective July 1, 2021, a “General Definition of Western Approved Micro-credentials” policy be introduced.

CARRIED

The Establishment of Subcommittee for Western Approved Micro-credentials was received for information.

REPORT OF THE UNIVERSITY RESEARCH BOARD

S.21-136 **ITEM 11.0 Report of the University Research Board**

A Senator submitted the following question in advance:

Please provide Senate with an update on any searches for Associate Vice-Presidents reporting to the Vice-President (Research).

L. Rigg, Vice-President (Research), responded that a large selection of applicants was received for the three Associate Vice-President (Research) positions. The selection committee narrowed the search to three candidates for each position. After interviews were conducted, the selection committee put their recommendations forward for the finalists identified. Negotiations are currently underway with the final candidates, and an announcement will be made once the appointment process is finalized.

SS.21-137 **11.1 Update on Western Research Parks Re-visioning**

L. Rigg provided Senators with a presentation on the Visioning and Strategic Planning of Western Research Parks. Stiletto Consulting firm was hired to carry out consultations; they have consulted with Deans, Associate Deans (Research), University Research Board committee, key stakeholders across the community, staff of the Research Park, Research Park Board, and other industries. The information collected will be incorporated into the University Strategic plan in the fall.

S.21-138 **DISCUSSION AND QUESTION PERIOD**

A Senator submitted the following questions in advance:

Follow-up Regarding Budget

a) During the budget presentation and in the budget documents there is information about a hiring of 77 tenure-track/probationary faculty, 17 limited-term faculty, and 100 staff. It is also stated that more specific information is not yet available. Do we now have the specific information so that we can see the breakdown of faculty hires by home faculty, and staff hires by faculty or by academic support unit or by administrative support unit? If faculties are to engage in hiring they should probably be starting on the process in the next month or two, given the complexities of hiring at the moment?

S. Prichard, Acting Provost & Vice-President (Academic) responded that through the planning and budget process, Deans came forward with their proposal for tenure track and limited term faculty appointments to be presented in the budget for approval. All the requests submitted from the faculties for the faculty complement planning have been approved this year. The number of hires vary by faculty; however, a breakdown of faculty hires by home faculty was not available to present at the Senate meeting. Deans are able to provide the figures of their proposals for tenure track and limited term faculty appointments that was submitted for approval.

S. Prichard advised the recruiting process begins once the requested positions and budget are approved. The recruiting cycle could take a year or longer to complete. Even though it would be preferable to start the hiring cycle early, it would be based on budget proposals and the requested faculty complement plans, and it would carry a risk of not being approved.

b) The budget presented in April presented several options for curricular development, including \$500K for summer teaching support internships for undergraduate students, \$2M for interdisciplinary curriculum initiatives approved by the provost and deans, \$1M for EDI curricular development through a Pathways program run by the Center for Teaching and Learning, \$1M for indigenizing university curriculum (including an Indigenous Curriculum Grant). Faculty members who have approached me have indicated they want to indigenize their courses, and to apply EDID principles to their courses, and to develop interdisciplinary initiatives. However, they need to know exactly what application systems are in place and when. It is already too late to set up programs that would have peer review and adjudication for courses in September 2021, but colleagues are anxious to see the possibility of some funding and research help for developing curricular initiatives for courses and programs in January 2022. Is there any clarity as to what the different competitions supervised by several different offices will be, and when they will become available. Also, will course release be available for developing new curricula, as well as library support, and funding for graduate students to help with developing new courses and programs?

S. Prichard responded that the Center for Teaching and Learning has drafted a plan that is under review. Opportunities to join in developing components of the plan will likely begin to develop in September. As the Strategic Plan is addressing these three areas identified in the question, further investments may be made in EDI curriculum development. Discussions regarding the interdisciplinary curriculum initiatives have recently started. A process is expected to be developed in the fall, and will likely include a request for proposals. As the process is developing, proposals will be adjudicated, and funds will be allotted. S. Prichard noted student involvement in the curriculum development is strongly endorsed, as student participation on previous initiatives has received positive feedback.

Vaccination and Training Reports

A Senator inquired if information on the vaccination rate of students by faculty and program can be made available in the fall. The Senator also queried if reports on the number of individuals who participated in various trainings offered such as EDI, sexual violence, anti-discrimination, can be made available by faculty.

The President responded that if information is collected on vaccinations, it must be contained and distributed in an anonymous format. In regard to reports on training participation by faculty, the President advised the idea will be taken into consideration as it could prompt an increase in participation.

Micro-credentials

A Senator inquired on the next steps for micro-credentials and if Faculties will be involved in creating micro-credentials.

The President responded it is the anticipation for micro-credentials to become a separate unit that could offer academic credits through the Faculties, and lifelong learning would carry out the logistics of student acceptance and registration.

S.21-139 **New Business**

G. Tigert (University Registrar) provided an oral update on Remote Proctoring.

Remote proctoring was used for 71 assessments for over 11,000 students in April. For the summer term, there are 68 scheduled remote proctored exams for 8,400 students, along with students who will write makeup exams from the April exam period.

The agreement to use the remote proctoring tool Proctortrack, as offered by eCampus Ontario through a partnership with the Ministry of Colleges and Universities agreement has ended. Western has undertaken the process of negotiating a proctoring tool agreement to address students concerns about privacy and security related to remote proctored assessments. A Remote Proctoring Selection Advisory Committee was established, composed of students, faculty and staff, to make a recommendation for a remote proctoring service provider for the University. Proctorio was chosen as Western's primary remote proctoring vendor because it addresses the privacy and security needs of students while meeting the technical requirements to integrate with Western's systems. Transition to Proctorio will take place over the summer to be utilized in the fall term. Proctorio cannot access personal files or system settings on user devices. It uses facial detection to detect if the test taker is looking away, leaves the room or if other people are present; it does not use facial recognition or track eye movements. All data will be owned by Western and stored on servers located in Canada. To minimize disruption to students and ensure continuity of the exam process for the summer term and in the case of a problem with Proctorio, such as an unexpected outage, Proctortrack has been secured as a secondary remote proctoring option. The agreement with Proctortrack ensures that there are contractual terms, practices and policies in place to protect students' privacy, personal information and data.

ADJOURNMENT

The meeting adjourned at 3:34 p.m.

A. Shepard
Chair

A. Bryson
University Secretary

ITEM 3.0 – Business Arising from the Minutes

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION/DISCUSSION

There is no business arising at this time.



President & Vice-Chancellor

REPORT OF THE PRESIDENT

To: Senators
From: Alan Shepard
Date: June 4, 2021
Re: President's Report to Senate

Dear Senators,

This report highlights some noteworthy developments since my last report to Senate of May 14, 2021.

COVID-19 update: As we make plans for a full return to in-person classes this fall, Western has received an overwhelmingly positive response to our decision to mandate that all students living in residence get vaccinated—a decision endorsed by the Middlesex-London Health Unit. We also strongly encourage all members of the campus community to get vaccinated as soon as they can. To support this, the university will operate an on-campus vaccination clinic later this summer to accommodate first and second doses for students, staff and faculty. We continue to work closely with local health and government officials in monitoring the evolving situation, and we will change course if necessary. Please continue watching <https://www.uwo.ca/coronavirus/> for the latest news. I will provide a further update on our pandemic response in my oral report.

Scholarship@Western surpasses milestone: On May 26, Western announced its open-source repository for research [Scholarship@Western](#) had reached 10 million downloads in just over 10 years. The homegrown database of faculty and graduate students' academic work has grown to host 30,000 digital objects including conference presentations, videos, audio, and webinars, offering free access to scholars around the world. Surpassing this milestone is a tribute to our entire campus community. Scholarship@Western represents an important means for sharing knowledge created at Western across the disciplines and raising our university's global profile.

Western online initiatives attract funding from eCampusOntario: On May 17, the Ministry of Colleges & Universities announced that 10 initiatives led by Western faculty have been awarded a total of \$1M in support of eCampusOntario's virtual learning strategy. Congratulations to all our colleagues involved with these projects which include: a blended Indigenous languages revitalization program, a gamified simulation training program for faculty development, an introductory communications course for new students in graduate programs, and a project titled "connecting for climate change action," among others.

Accolades: Congratulations also to the following campus community members who, among others, have received special honours in recent weeks:

- Professor **Tima Bansal** (Ivey) and **Dr. Amit Garg** (Medicine and Epidemiology & Biostatistics) awarded Western's 2021 Hellmuth Prizes for Achievement in Research.

- Professor Emeritus **Slobodan Simonovic** (Civil & Environmental Engineering) named by Reuters among the world's top 1,000 climate scientists.
- Professor **Jeff Tennant** (French Studies) named recipient of the 2021 Service Award from the Ontario Confederation of University Faculty Associations.
- Professors **Kelly Anderson** (Epidemiology & Biostatistics) and **Emma Duerden** (Education) named recipients of the 2021 Petro-Canada Young Innovator Awards.
- Professor **Jun Li** (Education) appointed Vice-President and President (designate) of the Comparative & International Education Society.
- Professor **Greg Kopp** (Civil & Environmental Engineering) named recipient of the 2021 Jack E. Cermak Medal from the American Society of Civil Engineers.
- **Julaine Hall** (Research Development Officer, Awards & Distinctions) recipient of the Directors' Award for Inter-Institutional Collaboration from the Canadian Association of Research Administrators.
- **Western's Communications team** recognized with three Awards of Excellence and two Awards of Merit from the International Association of Business Communicators for projects related to honouring the victims of Flight PS752, Western's operational response to the pandemic, COVID-19 research, and concussion research.
- Alumnus **David Patchell-Evans**, BA'77, LLD'12 (Founder & CEO, GoodLife Fitness) inducted to the Canadian Business Hall of Fame.

Leadership update: Effective May 10, Vice-Provost (Academic Programs) **John Doerksen** and AVP (Housing & Ancillary Services) **Chris Alleyne** assumed joint leadership responsibilities for the Student Experience portfolio. We thank John and Chris for taking on these extra duties on top of their existing roles while a search is undertaken for Western's next Student Experience leader. We also wish former AVP (Student Experience) **Jennie Massey** all the best for success in her new role as a Partner with executive search firm KBRS.

Also on May 10, **Lisa Highgate** was appointed Special Advisor to the President on Anti-Racism. Serving in this temporary role through August 31, 2021, Lisa continues with her existing duties as Associate Director, Residence Conduct & Conflict Resolution. Lisa is serving in the Special Advisor role jointly with **Bertha Garcia** while the search for Western's first AVP of EDI continues. As Special Advisor, Lisa replaces **Nicole Kaniki** who recently joined the University of Toronto as their Director of Diversity, Equity & Inclusion in Research & Innovation. We wish Nicole all the best for continued success in her new role.

The work of committees for the following leadership positions remains underway: Provost & Vice-President (Academic), Associate Vice-President (EDI), Dean of the Faculty of Law, Vice-Provost (Academic Programs), and Vice-Provost (School of Graduate & Postdoctoral Studies). **The searches for each of the three Associate Vice-Presidents of Research (Arts, Humanities & Social Science; Health; Science, Engineering & Technology) are near completion.**

ITEM 5.1(a) – Revisions to the Terms of Reference of the Operations/Agenda Committee

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That the Terms of Reference of the Operations/Agenda Committee be revised as shown, effective July 1, 2021.

EXECUTIVE SUMMARY:

The Operations/Agenda Committee (OAC) reviewed its terms of reference at its February 4, March 4 and April 8 meetings. At its May 6 meeting OAC approved revisions to its terms of reference for recommendation to Senate.

Proposed changes to the terms of reference include:

- Clarification that members must be current members of Senate.
- Clarification that the Chair of the Committee shall be the Vice-Chair of Senate and that the Committee shall elect a Vice-Chair of the Committee annually.
- Editorial amendments to provide clarity and correct a title.
- Addition of a standardized *General Process for Senate Committees and Boards* section containing information relating to quorum and terms of office for elected members, as set out in the Senate By-Laws.

Consideration was given to the composition of the committee. OAC concluded that the current composition is appropriate for the work the committee does.

ATTACHMENTS:

[Revisions to the Terms of Reference of the Operations/Agenda Committee – Track Changes Copy](#)
[Revisions to the Terms of Reference of Operations/Agenda Committee – Clean Copy](#)

Operations/Agenda (OAC)

Effective Date: July 1, 2021 July 2008

Supersedes: July 2008 *

Date of Next Review: Spring 2024

TERMS OF REFERENCE

To supervise the operation of the Senate and make recommendations on: rules of order, by-laws, change in committee functions, establishment of new standing or ad hoc committees, and other operational matters.

To organize the business of the Senate through the preparation of the Agenda and the dissemination to members of the Senate of information pertinent to the Agenda.

To review the role and operation of Standing Committees.

To present to Senate annually nominations for membership of the Senate Nominating Committee.

To appoint the Officers of Convocation.

To report to Senate at least annually on behalf of the Convocation Board and the Senate Review Board (Academic).

To invite to meetings of the Senate such persons who might be interested in, or who could contribute to, debate or discussion on any Senate matter to be discussed at a meeting.

To request Senate Committees, Councils, and Advisory Committees that do not report to Senate on a regular basis to do so at least once a year.

Operations/Agenda (OAC)

COMPOSITION

Elected membership:

Nine members of Senate, elected by Senate, at least one of whom shall be a student.

Members must be current members of Senate.

Ex officio (voting):

President & Vice-Chancellor
Provost & Vice-President (Academic)
Vice-President (Operations & Finance)
Vice-Chair of Senate
Chair of the Nominating Committee
~~Secretary of Senate (non-voting)~~

Ex officio (non-voting):

University Secretary

~~Members shall be current members of Senate.~~

The Chair **of the Committee** shall be the Vice-Chair of Senate. ~~the~~ **The** Committee shall elect a Vice-Chair **of the Committee** annually.

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: At set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 7 members, including 5 elected/appointed
Quorum June to August: 5 members, including 3 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).



Operations/Agenda (OAC)

Effective Date: July 1, 2021

Supersedes: July 2008

Date of Next Review: Spring 2024

TERMS OF REFERENCE

To supervise the operation of the Senate and make recommendations on rules of order, by-laws, change in committee functions, establishment of new standing or ad hoc committees, and other operational matters.

To organize the business of the Senate through the preparation of the Agenda and the dissemination to members of the Senate of information pertinent to the Agenda.

To review the role and operation of Standing Committees.

To present to Senate annually nominations for membership of the Senate Nominating Committee.

To appoint the Officers of Convocation.

To report to Senate at least annually on behalf of the Convocation Board and the Senate Review Board (Academic).

To invite to meetings of the Senate such persons who might be interested in, or who could contribute to, debate or discussion on any Senate matter to be discussed at a meeting.

To request Senate Committees, Councils, and Advisory Committees that do not report to Senate on a regular basis to do so at least once a year.

Operations/Agenda (OAC)

COMPOSITION

Elected membership:

Nine members of Senate, elected by Senate, at least one of whom shall be a student.
Members must be current members of Senate.

Ex officio (voting):

President & Vice-Chancellor
Provost & Vice-President (Academic)
Vice-President (Operations & Finance)
Vice-Chair of Senate
Chair of the Nominating Committee

Ex officio (non-voting):

University Secretary

The Chair of the Committee shall be the Vice-Chair of Senate. The Committee shall elect a Vice-Chair of the Committee annually.

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: At set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 7 members, including 5 elected/appointed
Quorum June to August: 5 members, including 3 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).

ITEM 5.1(b) – Revisions to the Terms of Reference of the Nominating Committee

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That the Terms of Reference of the Nominating Committee be revised as shown, effective July 1, 2021.

EXECUTIVE SUMMARY:

At the request of the Operations/Agenda Committee (OAC), the Nominating Committee reviewed its terms of reference at its February 4, March 4, April 8 and April 29 meetings. At its May 20 meeting, the Nominating Committee approved revisions to its terms of reference for recommendation to Senate through OAC. OAC subsequently considered the proposal at its June 3 meeting and is now recommending revisions to the terms of reference of the Nominating Committee, as detailed in the attached.

Proposed changes to the terms of reference include:

- A restructuring of the information in the “Procedures” section to present the nominating process in a more logical sequence.
- Clarification that the committee will normally be informed of positions to be filled 10 days prior to each meeting.
- Addition of a statement that information about vacancies will also be made available to the University community.
- Clarification that the committee will consider all nominations it receives without regard to the source of the nomination.
- Updated language relating to equity, diversity and inclusion.
- Clarification regarding the annual election of a Chair and Vice-Chair.
- Addition of a standardized *General Process for Senate Committees and Boards* section containing information relating to quorum and terms of office for elected members, as set out in the Senate By-Laws.

Consideration was given to the composition of the committee. The Nominating Committee concluded that the current composition is appropriate for the work the committee does.

ATTACHMENTS:

[Revisions to the Terms of Reference of the Nominating Committee – Track Changes Copy](#)
[Revisions to the Terms of Reference of the Nominating Committee – Clean Copy](#)

Nominating Committee

Effective Date: July 1, 2021 ~~December 2016~~

Supersedes: ~~December 2016~~; July 2008

Date of Next Review: Spring 2024

TERMS OF REFERENCE

To nominate members for standing and ad hoc committees of the Senate (except for the Nominating Committee), and Senate representation on other bodies as requested by Senate.

PROCEDURES

The committee will normally be informed of positions to be filled 10 days prior to each meeting of the committee. Information about vacancies will also be made available to the University Community.

The committee shall only consider nominations accompanied by a paragraph of not more than 100 words outlining the reasons for nomination and the candidate's suitability for the position.

It is the responsibility of members of the committee to ensure that there are sufficient nominees for consideration for positions being filled and to confirm that any nominees consent to the nomination.

The committee shall consider all nominations it receives without regard to the source of the nomination.

Foundational to the work of the committee is a commitment to ensure that candidates represent the breadth of the university's academic community in the diversity of indigeneity, race, gender identity/expression, ability, sexual orientation and religion. Diversity of our community is one of our strengths and is integral to the decision-making and governance of our institution.

The committee will present nominees for the positions to be filled in the agenda materials circulated in advance of each Senate meeting. At the Senate meeting, the Chair of the committee will call for any further nominations for any of the vacancies to be filled.

Nominating Committee

In carrying out its responsibility, the committee endeavors to present slates of candidates that are diverse, that represent the breadth of the university's academic community, and are gender-balanced.

The committee gives full consideration to all nominations presented to it whether those are self-nominations or nominations put forward by committee members.

It is the responsibility of members of the committee to ensure that there are sufficient nominees for consideration for positions being filled and for confirming that any nominees put forward are willing to take on the roles for which they are being nominated if elected.

The committee will inform Senate of positions to be filled prior to each meeting. All nominations must include a paragraph of not more than 100 words outlining the reasons for nomination and the candidate's suitability for the role.

COMPOSITION

Elected membership:

Seven members of Senate, elected by Senate, at least one of whom shall be a graduate student. Not more than two members **may be** from a single **Faculty or School** academic unit. The School of Graduate and Postdoctoral Studies is not considered **an academic unit a School** in this context.

There will be **Three** alternates who are members of Senate, **elected by Senate**, one of whom is a student, to attend meetings when regular members are unable to attend.

The committee shall elect a Chair and Vice-Chair annually.

Ex officio **(voting)**:

President & Vice-Chancellor
Provost & Vice-President (Academic)
Vice-President (Operations & Finance)
Chair, Western Student Senators

Ex officio (non-voting):

University Secretary
Secretary of Senate (non-voting)

Nominating Committee

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: As set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 6 members, including 4 elected/appointed

Quorum June to August: 4 members, including 3 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).



Nominating Committee

Effective Date: July 1, 2021

Supersedes: December 2016; July 2008

Date of Next Review: Spring 2024

TERMS OF REFERENCE

To nominate members for standing and ad hoc committees of the Senate (except for the Nominating Committee) and Senate representation on other bodies as requested by Senate.

PROCEDURES

The committee will normally be informed of positions to be filled 10 days prior to each meeting of the committee. Information about vacancies will also be made available to the University Community.

The committee shall only consider nominations accompanied by a paragraph of not more than 100 words outlining the reasons for nomination and the candidate's suitability for the position.

It is the responsibility of members of the committee to ensure that there are sufficient nominees for consideration for positions being filled and to confirm that any nominees consent to the nomination.

The committee shall consider all nominations it receives without regard to the source of the nomination.

Foundational to the work of the committee is a commitment to ensure that candidates represent the breadth of the university's academic community in the diversity of indigeneity, race, gender identity/expression, ability, sexual orientation and religion. Diversity of our community is one of our strengths and is integral to the decision-making and governance of our institution.

The committee will present nominees for the positions to be filled in the agenda materials circulated in advance of each Senate meeting. At the Senate meeting, the Chair of the committee will call for any further nominations for any of the vacancies to be filled.

Nominating Committee

COMPOSITION

Elected membership:

Seven members of Senate, elected by Senate, at least one of whom shall be a graduate student. No more than two members may be from a single Faculty or School. The School of Graduate and Postdoctoral Studies is not considered a School in this context.

Three alternates who are members of Senate, elected by Senate, one of whom is a student, to attend meetings when regular members are unable to attend.

The committee shall elect a Chair and Vice-Chair annually.

Ex officio (voting):

President & Vice-Chancellor
Provost & Vice-President (Academic)
Vice-President (Operations & Finance)
Chair, Western Student Senators

Ex officio (non-voting):

University Secretary

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: As set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 6 members, including 4 elected/appointed
Quorum June to August: 4 members, including 3 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).

ITEM 5.1(c) – Revisions to the Terms of Reference of the Senate Committee on University Planning

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That the Terms of Reference of the Senate Committee on University Planning be revised as shown, effective July 1, 2021, and notwithstanding the changes to eligibility for membership, that members duly elected to the committee prior to July 1, 2021 be permitted to complete their terms.

EXECUTIVE SUMMARY:

At the request of the Operations/Agenda Committee (OAC), the Senate Committee on University Planning (SCUP) reviewed its terms of reference at its February 3, April 7 and April 26 meetings. At its May 31 meeting, SCUP approved revisions to its terms of reference for recommendation to Senate through OAC. OAC subsequently considered the proposal at its June 3 meeting and is now recommending revisions to the terms of reference of SCUP, as detailed in the attached.

Proposed changes to the terms of reference include:

- Addition of a statement indicating that the committee receives the Annual Report of the Working Group on Information Security for information and transmittal to Senate.
- Addition of a clause indicating that SCUP has the authority to create subcommittees and working groups as necessary.
- Inclusion of a requirement that members of faculty elected by Senate must be members of Senate at the time their term on the committee begins.
- Removal of the Chair of SCAPA as an ex officio member.
- Editorial amendments to language to provide clarity and correct titles.
- Addition of a standardized *General Process for Senate Committees and Boards* section containing information relating to quorum and terms of office for elected members, as set out in the Senate By-Laws.

ATTACHMENTS:

[Revisions to the Terms of Reference of the Senate Committee on University Planning – Track Changes Copy](#)
[Revisions to the Terms of Reference of the Senate Committee on University Planning – Clean Copy](#)



University Planning (SCUP)

Effective Date: **July 1, 2021** ~~June 5, 2020~~

Supersedes: **June 5, 2020;** September 22, 2017; July 1, 2017; July 2014

Date of Next Review: **Spring 2024**

TERMS OF REFERENCE

The Committee is the chief forum within Senate for critical appraisal and coordination of long-term strategic, capital and budget plans for the University and makes recommendations concerning these to Senate, with appropriate commentary. Within this broad planning context, it has specific responsibilities as follows:

Long-Range Planning

To review and recommend to Senate for recommendation to the Board of Governors long-range strategic plans, capital plans, planning priorities and non-academic programs for the University.

To review and transmit to Senate, for approval or information as appropriate, reports and recommendations from ~~the~~ **its** Subcommittee on Enrolment Planning and Policy relating to enrolment projections and policies, admission targets and program capacities.

To receive for information and transmittal to Senate updates on implementation of and amendments to approved plans.

Budgets

To review and recommend to Senate the annual operating and capital budgets, ensuring that such budgets take into full consideration approved strategic priorities and plans. Based on this recommendation, Senate provides advice concerning these budgets to the Board of Governors through the President & Vice ~~Chancellor~~.

To receive for information and transmittal to Senate reports on ~~additions~~ **changes** to operating expenditures as approved by the Board of Governors.

University Planning

Academic Structures

To review and recommend to Senate proposals for the creation, deletion, or restructuring of academic units.

To review and recommend for approval (either to Senate or directly to the Board of Governors through the Vice-Chancellor) the establishment of designated chairs, professorships, and faculty fellowships, consistent with University policy. Proposals that are recommended directly to the Board of Governors require the approval of a two-thirds majority of members present and voting.

Information Technology

To review and transmit to Senate for approval or information as appropriate, reports from the its Subcommittee on Information Technology on security issues relating to information technology, issues relating to the internet, and policy development in the area of information technology.

Reports for Information

In keeping with its responsibilities, the Committee receives for information and transmittal to Senate a number of reports for information including:

- Annual Report of the University Librarian
- Reports on Faculty Recruitment and Retention
- Report on Enrolment and Entering Averages
- Annual Report on Performance Activity Indicators
- National Survey of Student Experience (NSSE) Institutional Benchmark Report
- **Annual Report of the Working Group on Information Security (WGIS)**
- Briefs for submission to external bodies

The Committee has the authority to create subcommittees and working groups as necessary.

COMPOSITION

Elected/appointed membership:

12 members elected by Senate as follows:

- Six members of faculty who are members of Senate at the time elected at the time their term on the Committee begins, only one of whom may be a Dean
- Two graduate students (the President of the Society of Graduate Students shall qualify as a student for this purpose)
- One undergraduate student Senator
- Two members of administrative staff
- One postdoctoral fellow

University Planning

Board of Governors:

Two **members representatives** of the Board of Governors, appointed by the Board.

Ex officio **(voting):**

President & Vice-Chancellor
Provost & Vice-President (Academic)
Vice-President (Operations & Finance)
Vice-President (Research)
Vice-Provost (Graduate and Postdoctoral Studies)
Vice-Provost and Chief Librarian
Vice-Provost and Associate Vice-President (Indigenous Initiatives)

Chair of SCAPA

Academic Colleague

One Principal **or President** of an Affiliated University College (appointed **for a three-year term** on a rotating basis **among the Affiliated University Colleges**)

President, University Students' Council

University Secretary (non-voting)

Ex officio (non-voting):

University Secretary

Resource (non-voting):

Associate Vice-President (Financial Services)
Associate Vice-Presidents (Facilities Management)
Associate Vice-President (Planning, Budgeting, and Information Technology)
Vice-Provost (Academic Planning, Policy & Faculty)

The Committee shall elect a Chair annually from among the **members elected by Senate** ~~Senate-elected~~ ~~members~~. The Provost & Vice-President (Academic) shall be Vice-Chair.

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: As set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 12 members, including 7 elected/appointed

Quorum June to August: 8 members, including 5 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).

University Planning (SCUP)

Effective Date: July 1, 2021

Supersedes: June 5, 2020; September 22, 2017; July 1, 2017; July 2014

Date of Next Review: Spring 2024

TERMS OF REFERENCE

The Committee is the chief forum within Senate for critical appraisal and coordination of long-term strategic, capital and budget plans for the University and makes recommendations concerning these to Senate, with appropriate commentary. Within this broad planning context, it has specific responsibilities as follows:

Long-Range Planning

To review and recommend to Senate for recommendation to the Board of Governors long-range strategic plans, capital plans, planning priorities and non-academic programs for the University.

To review and transmit to Senate, for approval or information as appropriate, reports and recommendations from its Subcommittee on Enrolment Planning and Policy relating to enrolment projections and policies, admission targets and program capacities.

To receive for information and transmittal to Senate updates on implementation of and amendments to approved plans.

Budgets

To review and recommend to Senate the annual operating and capital budgets, ensuring that such budgets take into full consideration approved strategic priorities and plans. Based on this recommendation, Senate provides advice concerning these budgets to the Board of Governors through the President & Vice-Chancellor.

To receive for information and transmittal to Senate reports on changes to operating expenditures as approved by the Board of Governors.

Academic Structures

To review and recommend to Senate proposals for the creation, deletion or restructuring of academic units.

To review and recommend for approval (either to Senate or directly to the Board of Governors through the Vice-Chancellor) the establishment of designated chairs, professorships and faculty fellowships, consistent with University policy. Proposals that are recommended directly to the Board of Governors require the approval of a two-thirds majority of members present and voting.

Information Technology

To review and transmit to Senate for approval or information as appropriate reports from its Subcommittee on Information Technology on security issues relating to information technology, issues relating to the internet, and policy development in the area of information technology.

Reports for Information

In keeping with its responsibilities, the Committee receives for information and transmittal to Senate reports including:

- Annual Report of the University Librarian
- Reports on Faculty Recruitment and Retention
- Report on Enrolment and Entering Averages
- Annual Report on Performance Activity Indicators
- National Survey of Student Experience (NSSE) Institutional Benchmark Report
- Annual Report of the Working Group on Information Security (WGIS)
- Briefs for submission to external bodies

The Committee has the authority to create subcommittees and working groups as necessary.

COMPOSITION

Elected/appointed membership:

12 members elected by Senate as follows:

- Six members of faculty who are members of Senate at the time their term on the Committee begins, only one of whom may be a Dean
- Two graduate students (the President of the Society of Graduate Students shall qualify as a student for this purpose)
- One undergraduate student Senator
- Two members of administrative staff
- One postdoctoral fellow

Two members of the Board of Governors, appointed by the Board

Ex officio (voting):

President & Vice-Chancellor
Provost & Vice-President (Academic)
Vice-President (Operations & Finance)
Vice-President (Research)
Vice-Provost (Graduate and Postdoctoral Studies)
Vice-Provost and Chief Librarian
Vice-Provost and Associate Vice-President (Indigenous Initiatives)
Academic Colleague
One Principal or President of an Affiliated University College (appointed for a three-year term on a rotating basis among the Affiliated University Colleges)
President, University Students' Council

Ex officio (non-voting):

University Secretary

Resource (non-voting):

Associate Vice-President (Financial Services)
Associate Vice-President (Facilities Management)
Associate Vice-President (Planning, Budgeting, and Information Technology)
Vice-Provost (Academic Planning, Policy & Faculty)

The Committee shall elect a Chair annually from among the members elected by Senate. The Provost & Vice-President (Academic) shall be Vice-Chair.

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: As set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 12 members, including 7 elected/appointed
Quorum June to August: 8 members, including 5 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).

ITEM 5.1(d) – Revisions to the Terms of Reference of the University Research Board

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That the Terms of Reference of the University Research Board be revised as shown, effective July 1, 2021.

EXECUTIVE SUMMARY:

At the request of the Operations/Agenda Committee (OAC), the University Research Board (URB) reviewed its terms of reference at its February 2 and March 2 meetings. At its April 6 meeting, the University Research Board approved revisions to its terms of reference for recommendation to Senate through OAC. OAC subsequently considered the proposal at its June 3 meeting and is now recommending revisions to the terms of reference of URB, as detailed in the attached.

Proposed changes to the terms of reference include:

- Adoption of the language being used in the Strategic Plan around research, scholarship and creative activity.
- Clarification on what URB reports to Senate.
- Addition of the ability for URB to establish or recommend the establishment of advisory committees, subcommittees and working groups as required.
- Edits to include more inclusive language regarding equity, diversity, and inclusion.
- Edits to provide clarification on the role of URB.
- Addition of a standardized *General Process for Senate Committees and Boards* section containing information relating to quorum and terms of office for elected members, as set out in the Senate By-Laws.

Proposed changes to the composition of URB include:

- Increasing the number of members elected by Senate by two as follows:
 - Addition of one undergraduate student
 - Addition of one senior member of administrative staff serving in a leadership position with a research focus.
- Addition of one member of faculty appointed by the Vice-President (Research) to further promote a diverse representation of researchers.
- Addition of the Associate Vice-President (Equity, Diversity & Inclusion) as an ex officio voting member.
- Reclassification of Resource members as non-voting ex officio members.

ATTACHMENTS:

[Revisions to the Terms of Reference of the University Research Board – Track Changes Copy](#)
[Revisions to the Terms of Reference of the University Research Board – Clean Copy](#)

University Research Board

Effective Date: **July 1, 2021** ~~June 5, 2020~~

Supersedes: **June 5, 2020**; July 2017; March 2011

Date of Next Review: Spring 2024

TERMS OF REFERENCE

The University Research Board is advisory to the Vice-President (Research) and is the chief forum within Senate for critical appraisal and coordination of long-term strategic **research plan****nings relating to research, scholarship and creative activity** and oversight of research policies, practices and procedures. Within this broad planning context, it has specific responsibilities as follows:

1. The Board assists the Vice-President (Research) in the development of long-term research plans, **that are representative of the diversity of scholarship at Western, and the reviewing of draft plans prior to submission to Senate. The Board also assists the Vice-President (Research) in monitoring research performance within the framework of those plans.**
2. The Board identifies key research-related issues for review and consideration **including issues that reflect the breadth and depth of Western's research community and provides comment on initiatives and programs which will develop and promote research integrity and the conduct of quality research in a scholarly environment.**
3. The Board provides advice and support with respect to communication of research strategies.
4. The Board receives and reviews the annual report of the Vice-President (Research) **which may include current research priorities, collaborative and cross disciplinary initiatives, community based research partnerships, developments relating to scholarship and funding research opportunities, Western's positioning as a national and international research institution, and the academic underpinnings of current and future research initiatives for Western,** and advises on its content and presentation before forwarding it to Senate for information and discussion.
5. The Board reviews and recommends to Senate for approval, **new or revised research policies.**
6. In accordance with MAPP 7.9, *Establishment, Governance & Review of Research Institutes, Centres and Groups*, the Board:
 - Reviews and recommends to Senate for approval the establishment of Research Institutes;
 - Receives for information and forwarding to Senate at least annually notice of the establishment of Research Centres, **and of the renewal or discontinuance of Research Institutes and Centres;**

University Research Board

- Appoints two of its members to the Committee on Research Institutes.
7. The Board receives reports on a wide range of research-related issues such as research ethics policies, processes and operations; animal care policies, processes and operations; research partnerships; research transfer and the work of WORLDDiscoveries; internal grant programs operated through Research Western, including the outcomes and processes; **and** work of the research-related committees established by Senate or by URB.
 8. The Board reports regularly on its activities to Senate. **This reporting includes high-level informational updates about advances within the research portfolio that would highlight administrative policies that affect teaching, learning, and research environments; the establishment or termination of research related institutes or units; the establishment of chairs, scholarships, fellowships, and the like; key affiliations with other institutions, units or external organizations for research purposes; the collaboration of research areas across campus to expand the breadth and scope of research initiatives; and long-range strategic and campus plans integral to the advancement of the research portfolio.**
 9. **The Board will establish or recommend the establishment of advisory committees, subcommittees and working groups as required to develop and review policy in respect of research matters.**

COMPOSITION

~~Fifteen~~ **Seventeen voting** members elected by Senate as follows:

- Eleven members of faculty (one from each faculty/school, excluding SGPS), at least one of whom occupies a senior position in a Research Centre or Institute as defined under [MAPP 7.9](#) (Establishment, Governance and Review of Research Institutes, Centres and Groups)
- **One undergraduate student**
- Two graduate students
- Two postdoctoral representatives
- **One senior member of administrative staff serving in a leadership position with a research focus**

One Associate Dean (Research) elected by the Associate Deans (Research)

One Dean of a faculty/school appointed by the Vice-President (Research)*

One member of faculty appointed by the Vice-President (Research) to further promote a diverse representation of researchers*

Ex officio **(voting)**:

- Vice-President (Research) ~~(Chair)~~
- Provost & Vice-President (Academic)
- ~~Two~~ **The** Associate Vice-Presidents (Research)
- Vice-Provost (Graduate and Postdoctoral Studies)
- Vice-Provost and Associate Vice-President (International)
- Vice-Provost and Associate Vice-President (Indigenous Initiatives)
- **Associate Vice-President (Equity, Diversity & Inclusion)**
- ~~One Associate Dean (Research) elected by the Associate Deans (Research)~~
- ~~One Dean of a faculty/school appointed by the Vice-President (Research)~~

University Research Board

Ex officio (non-voting):

- Director, Animal Care & Veterinary Services and University Veterinarian
- Executive Director, WORLDiscoveries
- Executive Director, Western Research
- Director, Research Ethics and Compliance
- University Secretary

The Chair of the Board shall be the Vice-President (Research). The Board shall elect a Vice-Chair annually.

*the terms of the appointed members are two years, renewable twice

~~Resource (non-voting)~~

- ~~Director, WORLDiscoveries~~
- ~~Director, Animal Care and Veterinary Services~~
- ~~Director, Research Development and Services~~
- ~~Director, Research Ethics and Compliance~~
- ~~Secretary of Senate~~

~~The terms of the elected/appointed members are two years, renewable twice.~~

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: As set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 14 members, including 10 elected/appointed
Quorum June to August: 10 members, including 7 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).

University Research Board

Effective Date: July 1, 2021

Supersedes: June 5, 2020; July 2017; March 2011

Date of Next Review: Spring 2024

TERMS OF REFERENCE

The University Research Board is advisory to the Vice-President (Research) and is the chief forum within Senate for critical appraisal and coordination of long-term strategic planning relating to research, scholarship and creative activity and oversight of research policies, practices and procedures. Within this broad planning context, it has specific responsibilities as follows:

1. The Board assists the Vice-President (Research) in the development of long-term research plans, that are representative of the diversity of scholarship at Western, and the review of draft plans prior to submission to Senate. The Board also assists the Vice-President (Research) in monitoring research performance within the framework of those plans.
2. The Board identifies key research-related issues for review and consideration including issues that reflect the breadth and depth of Western's research community and provides comment on initiatives and programs which will develop and promote research integrity and the conduct of quality research in a scholarly environment.
3. The Board provides advice and support with respect to communication of research strategies.
4. The Board receives and reviews the annual report of the Vice-President (Research) which may include current research priorities, collaborative and cross disciplinary initiatives, community based research partnerships, developments relating to scholarship and funding research opportunities, Western's positioning as a national and international research institution, and the academic underpinnings of current and future research initiatives for Western, and advises on its content and presentation before forwarding it to Senate for information and discussion.
5. The Board reviews and recommends to Senate for approval new or revised research policies.

University Research Board

6. In accordance with MAPP 7.9, *Establishment, Governance & Review of Research Institutes, Centres and Groups*, the Board:
 - Reviews and recommends to Senate for approval the establishment of Research Institutes;
 - Receives for information and forwarding to Senate at least annually notice of the establishment of Research Centres and of the renewal or discontinuance of Research Institutes and Centres;
 - Appoints two of its members to the Committee on Research Institutes.
7. The Board receives reports on a wide range of research-related issues such as research ethics policies, processes and operations; animal care policies, processes and operations; research partnerships; research transfer and the work of WORLDdiscoveries; internal grant programs operated through Research Western, including the outcomes and processes; and work of the research-related committees established by Senate or by URB.
8. The Board reports regularly on its activities to Senate. This reporting includes high-level informational updates about advances within the research portfolio that would highlight administrative policies that affect teaching, learning, and research environments; the establishment or termination of research related institutes or units; the establishment of chairs, scholarships, fellowships, and the like; key affiliations with other institutions, units or external organizations for research purposes; the collaboration of research areas across campus to expand the breadth and scope of research initiatives; and long-range strategic and campus plans integral to the advancement of the research portfolio.
9. The Board will establish or recommend the establishment of advisory committees, subcommittees and working groups as required to develop and review policy in respect of research matters.

COMPOSITION

Seventeen voting members elected by Senate as follows:

- Eleven members of faculty (one from each faculty/school, excluding SGPS), at least one of whom occupies a senior position in a Research Centre or Institute as defined under [MAPP 7.9](#) (Establishment, Governance and Review of Research Institutes, Centres and Groups)
- One undergraduate student
- Two graduate students
- Two postdoctoral representatives
- One senior member of administrative staff serving in a leadership position with a research focus

One Associate Dean (Research) elected by the Associate Deans (Research)

One Dean of a faculty/school appointed by the Vice-President (Research)*

University Research Board

One member of faculty appointed by the Vice-President (Research) to further promote a diverse representation of researchers*

Ex officio (voting):

- Vice-President (Research)
- Provost & Vice-President (Academic)
- The Associate Vice-Presidents (Research)
- Vice-Provost (Graduate and Postdoctoral Studies)
- Vice-Provost and Associate Vice-President (International)
- Vice-Provost and Associate Vice-President (Indigenous Initiatives)
- Associate Vice-President (Equity, Diversity & Inclusion)

Ex officio (non-voting):

- Director, Animal Care & Veterinary Services and University Veterinarian
- Executive Director, WORLDdiscoveries
- Executive Director, Western Research
- Director, Research Ethics and Compliance
- University Secretary

The Chair of the Board shall be the Vice-President (Research). The Board shall elect a Vice-Chair annually.

*the terms of the appointed members are two years, renewable twice

GENERAL PROCESS FOR SENATE COMMITTEES AND BOARDS

Quorum: As set out in Senate By-Law VI.11.(a), quorum shall be one-half of the voting members, including at least one-half of the elected or appointed members, during September to May, and one-third of the voting members, including one-third of the elected or appointed members, during June, July and August.

Quorum September to May: 14 members, including 10 elected/appointed
Quorum June to August: 10 members, including 7 elected/appointed

Terms: The terms of office for elected members shall be one year (renewable) for students and two years (renewable) for faculty/others, as set out in Senate By-Law VI.10.(a).

ITEM 5.2 – Nominating Committee Membership

ACTION REQUIRED: FOR ACTION FOR INFORMATION

SENATE NOMINATING COMMITTEE
[Must be members of Senate]
Workload: Meets monthly, the Thursday of the week before Senate at 9:30 a.m.

Composition: Regular Members:
Seven (7) members of Senate, at least one (1) of whom is a graduate student and no more than two members from a single unit.

Alternate Members:
Three (3) members of Senate, at least one of whom is a student

Nominating Committee Membership as of July 1, 2021:

Terms to June 30, 2022:

Regular Members: J. Compton (FIMS), V. Jaremek (graduate student), K. Yeung (Sci),
A. Schuurman (AH) (*July 1 to Dec. 31, 2021 only*)/A. Borchert (AH) (*Jan. 1 to June 30, 2022 only*)

Alternate Member: S. Burke (HS), **vacancy (student senator)**

Terms to June 30, 2023:

Regular Members: M. Cleveland (SS), Z. Sinel (Law), L. Stephenson (SS),
Alternate Members: D. Laird (Schulich)

Required: **Alternate Committee Members:**

One (1) student Senator to serve as alternate member of the Nominating Committee.

Nominee: Elias Boussoulas (Student Senator) term to June 30, 2022

ATTACHMENT:

[Senate membership, effective July 1, 2021](#)

Senate Membership 2021-2022

EX OFFICIO (20 voting members and 1 non-voting member)

Chancellor	Linda Hasenfratz
President & Vice-Chancellor	Alan Shepard
Acting Provost & Vice-President (Academic)	Sarah Prichard
Vice-President (Operations & Finance)	Lynn Logan
Vice-President (Research)	Lesley Rigg
Vice-President (University Advancement)	Jeff O'Hagan
Vice-Provost (School of Graduate & Postdoctoral Studies)	Linda Miller
Dean, Faculty of Arts and Humanities	Michael Milde
Dean, Ivey Business School	Sharon Hodgson
Dean, Faculty of Education	Donna Kotsopoulos
Dean, Faculty of Engineering	Ken Coley
Dean, Faculty of Health Sciences	Jayne Garland
Dean, Faculty of Information and Media Studies	Lisa Henderson
Dean, Faculty of Law	Erika Chamberlain
Dean, Schulich School of Medicine & Dentistry	John Yoo
Dean, Don Wright Faculty of Music	Betty Anne Younker
Dean, Faculty of Science	Matt Davison
Acting Dean, Faculty of Social Science	Joan Finegan
Vice-Provost and Chief Librarian	Catherine Steeves
University Registrar	Glen Tigert
University Secretary (non-voting)	Amy Bryson

ELECTED FACULTY (46 voting members)

FACULTY OF ARTS AND HUMANITIES (5)

Term to June 30/22:

Angela Borchert – on leave until Jan. 1, 2022

Constanza Burucúa (Languages & Cultures)

Mario Longtin (French Studies) – July 1, 2021 – Dec. 31, 2021 only

Mary Helen McMurrin – on leave until Jan. 1, 2022

Kelly Olson (Classical Studies) – July 1, 2021 – Dec. 31, 2021 only

Term to June 30/23:

Alena Robin (Languages & Cultures)

Anne Schuurman (English & Writing Studies)

IVEY BUSINESS SCHOOL (2)

Term to June 30/22:

Vaughan Radcliffe

Term to June 30/23:

Deishin Lee

FACULTY OF EDUCATION (2)

Term to June 30/22:

Jun Li

Term to June 30/23:

TBD (Faculty Appointment)

FACULTY OF ENGINEERING (2)

Term to June 30/22:

Thomas Jenkyn (Mechanical & Materials Engineering)

Term to June 30/23:

James Lacefield (Electrical & Computer Engineering)

SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES (10)

SGPS – At Large

Term to June 30/23:

Mark Cleveland (DAN Management & Organizational Studies)

SGPS – Arts and Humanities

Term to June 30/23:

Genevieve De Viveiros (French Studies)

SGPS – Business

Term to June 30/22:

TBD Faculty Appointment

SGPS – Education

Term to June 30/22:

Rachel Heydon

SGPS – Engineering

Term to June 30/23:

Shami Abdallah (Electrical & Computer Engineering)

SGPS – Health Sciences

Term to June 30/22:

Matthew Heath (Kinesiology)

SGPS – Law/FIMS/Music

Term to June 30/23:

Kevin Mooney (Music Research & Composition)

SGPS – Medicine & Dentistry

Term to June 30/23:

Shawn Whitehead (Anatomy & Cell Biology)

SGPS – Science

Term to June 30/22:

John Corrigan (Chemistry)

SGPS – Social Science

Term to June 30/22:

Jamie Baxter (Geography & Environment)

FACULTY OF HEALTH SCIENCES (4)

Term to June 30/22:

David Purcell (Communication Sciences & Disorders)

Victoria Smye (Nursing)

Term to June 30/23:

Shauna Burke (Health Studies)

Denise Connelly (Physical Therapy)

FACULTY OF INFORMATION AND MEDIA STUDIES (2)

Term to June 30/22:

James Compton

Term to June 30/23:

Ajit Pyati

FACULTY OF LAW (2)

Term to June 30/22:

Joanna Langille

Term to June 30/23:

Zoe Sinel

SCHULICH SCHOOL OF MEDICINE & DENTISTRY (5)

Term to June 30/22:

Rodney Dekoter (Microbiology & Immunology)

Robert Gros (Physiology & Pharmacology)

Gildo Santos (Dentistry)

Term to June 30/23:

Tisha Joy (Medicine)

Dale Laird (Anatomy & Cell Biology)

DON WRIGHT FACULTY OF MUSIC (2)

Term to June 30/22:

John Cuciurean (Music Research & Composition)

Term to June 30/23:

Sophie Roland (Music Performance Studies)

FACULTY OF SCIENCE (5)

Terms to June 30/22:

Pauline Barmby (Physics & Astronomy)

Jan Minac (Mathematics)

Ken Yeung (Chemistry)

Term to June 30/23:

Anwar Haque (Computer Science)

TBD (Faculty Appointment)

FACULTY OF SOCIAL SCIENCE (5)

Term to June 30/22:

Daniel Brou (Management & Organizational Studies)

TBD (Faculty Appointment)

Wolfgang Lehmann – on leave until Jan. 1, 2022

Julie Schermer (Management & Organizational Studies) –

July 1, 2021 – Dec. 31, 2021 only

Term to June 30/23:

Andrew Nelson (Anthropology)

Laura Stephenson (Political Science)

AFFILIATED UNIVERSITY COLLEGES (9 voting members)

BRESCIA UNIVERSITY COLLEGE (3)

Interim Principal

Cheryl Jensen

Term to June 30/22:

Lauretta Frederking

Term to June 30/23:

Sara Morrison

HURON UNIVERSITY COLLEGE (3)

President

Barry Craig

Term to June 30/22:

Geoff Read

Term to June 30/23:

Thomas Peace

KING'S UNIVERSITY COLLEGE (3)

Principal

David Malloy

Term to June 30/22:

Laura Lewis

Term to June 30/23:

TBD (King's Appointment)

STUDENTS (18 voting members)

UNDERGRADUATES (14)

Arts and Humanities/FIMS/Music (1)

Term to June 30/22:

Migrated to At-Large for 2021-22

Business/Education/Engineering/Law (1)

Term to June 30/22:

Shaurya Karky (Engineering)

Health Sciences (1)

Term to June 30/22: Elias Boussoulas

Medicine & Dentistry (1)

Term to June 30/22: Margi Patel

Science (2)

Term to June 30/22: Kenisha Arora
Maisha Fahmida

Social Science (2)

Term to June 30/22: Emilie Kalaydjian
Bianka Sriharan

Brescia, Huron, and King's University Colleges (2)

Term to June 30/22: Jack Chazi (Huron)
Claudia Gallant (Huron)

At Large (5)

Term to June 30/22: Iman Berry (Social Science)
Riley Kennedy (Social Science)
Artika Pahargarh (Ivey)
Lauren Stoyles (Huron)
Sandra Zivkovic (Health Sciences)

GRADUATE STUDENTS (4)

Term to June 30/22: Victoria Jaremek (Anatomy & Cell Biology)
Seth Kadish (Epidemiology & Biostatistics)
Julie Nord (Musicology)
Effie Sapuridis (Information & Media Studies)

ADMINISTRATIVE STAFF (2 voting members)

Term to June 30/22: Grace Kelly (Research Western)

Term to June 30/23: Jeff Watson (Careers and Experience)

GENERAL COMMUNITY (5 voting members)

Alumni Association (3)

President designate: TBD
Term to June 30/22: Sandra Datars Bere
Term to June 30/23: TBD

Elected by Senate (2)

Term to June 30/22: Patrick Peddle
Term to June 30/23: Sheila Powell

BOARD OF GOVERNORS (2 voting members)

Term to June 30/22: Keith Gibbons
Term to June 30/23: Cathy Burghardt-Jesson

OBSERVERS: (14 to 17 non-voting observers)

Pauline Barmby	Academic Colleague
John Doerksen	Vice-Provost (Academic Programs)
Margaret McGlynn	Vice-Provost (Academic Planning, Policy & Faculty)
Britta Baron	Vice-Provost and Associate Vice-President (International)
Christy Bressette	Vice-Provost and Associate Vice-President (Indigenous Initiatives)
Ruban Chelladurai	Associate Vice-President (Planning, Budgeting, and Information Technology)
Vacant	Associate Vice-President (Student Experience)
VACANT	Director, Undergraduate Recruitment and Admissions
Nigmendra Narain	President, UWO Faculty Association (UWOFA)
TBD	UWOFA-Librarians/Archivists (LA) Representative
Zamir Fakirani	President, University Students' Council (USC)
kirstyn seanor	President, Society of Graduate Students (SOGS)
TBD	President, PAW (designate)
Jenny Zhang	President, Master of Business Admin. Assoc. (MBAA)
Gillian Balfour, Dan Smith	Academic Dean(s) of Affiliated University College who are not currently in elected positions on Senate. <i>(Up to three, one each from Brescia, Huron and King's).</i>

TOTAL: 103 Senators (102 voting members) plus 14-17 official observers

Senate membership as of: July 1, 2021

ITEM 6.2 - Subcommittee for Western Approved Micro-credentials (SWAM)

ACTION REQUIRED: FOR ACTION FOR INFORMATION

Composition

Seven members elected by Senate:

- Five faculty members, one of whom shall be an Associate Dean (Undergraduate or Graduate), and one of whom shall be a Department Chair (or equivalent). No two members may be from the same faculty/school. The Committee shall elect a Chair and a Vice-Chair annually from among the 5 faculty members elected by Senate.
- Two students: one graduate and one undergraduate.
- 1 representative of the Affiliated University Colleges, appointed on a one-year rotational basis, in consultation with the Principal/President concerned.
- One member of SCAPA appointed by SCAPA.
- One representative, appointed on a two-year term, by the London Economic Development Corporation (LEDC).

Ex officio (voting):

- Director, Western Continuing Studies
- Director, Centre for Teaching and Learning

Ex officio (non-voting):

- University Registrar
- University Secretary

Required: (7) persons elected by the Senate, two of whom shall be students, one graduate and one undergraduate

Nominees:	<u>Rajender Singh</u>	(Student, GRAD)
	<u>Claudia Gallant</u>	(Student, UNDG)
	<u>Jeff Hutter (Sci)</u>	(Faculty/Associate Dean)
	<u>Miranda Green-Barteet (AH)</u>	(Faculty/Department Chair)
	<u>Lorraine Davies (SS)</u>	(Faculty)
	<u>John Doerksen (Mus)</u>	(Faculty)
	<u>David Sandomierski (Law)</u>	(Faculty)

ITEM 8.1 – Western University Strategic Plan

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That Senate provide advice to the Board of Governors through the President and Vice-Chancellor, recommending the approval of the draft strategic plan, *Towards Western at 150*, attached as [ITEM 8.1](#).

EXECUTIVE SUMMARY:

Please see the attached memo from the President for the executive summary of the draft strategic plan.

ATTACHMENTS:

[Memorandum from the President and Vice-Chancellor on the draft of Western’s new Strategic Plan Draft Strategic Plan, *Towards Western at 150*](#)



MEMORANDUM

TO: Senators

FROM: Alan Shepard

DATE: June 1, 2021

RE: Western's Strategic Plan

Dear Senators,

On behalf of the Strategic Planning Steering Committee (SPSC) I am pleased to share a draft of Western's new strategic plan.

This draft is the result of an extensive consultation process – one that was met with great enthusiasm from the entire Western community. This process included more than 3,700 inputs from more than 90 consultation sessions. The Senate Committee on University Planning (SCUP) was included in this consultation process, as well as a session open to all Senators.

On May 12, the SPSC held a virtual community information session open to all students, faculty, and staff to learn about the draft strategic plan and ask questions. The SPSC also shared and discussed a draft of the plan at Senate (May 14) and the Board of Governors (May 16). The draft plan was revised based on helpful feedback from all these sessions.

Throughout this process we have provided regular updates to Senators, and your involvement and feedback along the way has been greatly appreciated.

The result of all this engagement is a draft document that sets out an ambitious plan for Western as we look towards our sesquicentennial.

The draft strategic plan was approved by SCUP on May 31. At the June 11 Senate meeting we will be seeking your approval of the draft strategic plan to be presented to Western's Board of Governors on June 17.

Thank you again for your time and support of this important work.

TOWARDS WESTERN AT 150

DRAFT Strategic Plan for Review

Strategic Planning Steering Committee (SPSC)

Draft 33 – June 4, 2021 FOR SENATE

LAND ACKNOWLEDGEMENT

Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Chonnocton (Neutral) peoples. The Huron-Wendat peoples also have a history of living in this territory. In the London area, there were Treaty 6 London Township, Treaty 7 Sombra Township, and Treaty 21 Longwoods. This land continues to be home to diverse Indigenous Peoples (First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors to our society. By recognizing First Nations peoples' relationships to the land, we make explicit Indigenous Peoples' presence and rights to self-determination.

INTRODUCTION

As the world moves from pandemic to recovery, its leaders are being asked to take a fresh look at longstanding challenges. Western University is ready to take on this obligation with determination and creativity, to build on our successes, and to work toward a more prosperous, just and inclusive society.

The world needs the very best from its universities. Generations are depending on it. And so, we must take seriously our role in serving the public good.

Western has a distinguished history of doing just that. A history marked by the discoveries and achievements of individual scholars and teachers over the past 140 years, and our collective successes in advancing knowledge and building a thriving community. The result is a strong academic and research environment with world-class faculty and programs and a university that has long provided an unmatched student experience. These strengths have allowed us to attract top students, build state-of-the-art facilities, and raise the resources needed for ongoing support.

We are now poised to build a university ready to mark its sesquicentennial stronger, more energized, more influential, and more inclusive than ever before in its history.

Our commitments, our energy, our plans

We accept the challenge to lead in building a more inclusive world, and we understand that the work we do together toward greater equity and diversity will make Western better and stronger, more fit for the

twenty-first century. These are important commitments on which Western is making progress, and there is an energy in our community to do more.

We also recognize the potential in our academic community to increase the impact of our research, teaching and community engagement, and we seek to unleash that potential—on campus, in London, in Ontario, in Canada, and around the world.

This plan is designed to channel our community’s commitments, our energy, and our aspirations as we approach a milestone anniversary for the university and think creatively, ambitiously, and strategically about Western’s future.

Launched in Fall 2020, the process, led by the Strategic Plan Steering Committee (SPSC), has widely engaged students, faculty, and staff individually and in academic departments and administrative units, our alumni, members of the Senate and the Board of Governors, and members of the public. The plan is the result of an extensive consultation exercise involving all elements of the Western community.

These consultations revealed broad eagerness to advance Western in numerous directions and this plan embraces the multiple and varied ambitions that were raised during our consultations and other ambitions yet to be voiced. It embraces bold action, to experiment, to reach for our aspirations, to take more risks and to pursue achievements even when it seems beyond our grasp.

Out of these consultations, and having considered Western data and other evidence about the postsecondary education environment, the plan has identified three overarching themes:

- **THEME 1 - GREATER IMPACT**
 - Grow strategically
 - Stimulate our research, scholarship, and creative activity
 - Promote teaching and learning for the future
 - Enrich the student experience

- **THEME 2 - PEOPLE, COMMUNITY, AND CULTURE**
 - Advance Reconciliation with Indigenous communities
 - Create a more equitable and inclusive Western
 - Thrive through belonging

- **THEME 3 - WESTERN’S PLACE IN THE WORLD**
 - Concentrate on place, and ...
 - ... Engage the world
 - Sustainability, an imperative

This plan charts the direction the Western community will pursue to reach its aspirations. Detailed work on reaching these goals will come later this year, and in the years ahead, in response to and with ongoing reference to this plan.

This plan expresses great confidence in the energy of the Western community—of *ourselves*, as we chart an innovative and deeply *Western* path toward our next hundred and fifty years.

THEME 1 - GREATER IMPACT

Impact emerged as a key word in our planning.

Universities by their nature are constantly transforming themselves: creating new academic programs, pursuing new avenues of research, welcoming new students, staff and faculty—in short, always changing.

The question for universities is not “should we change” but rather “how should we change?”

There is a strong desire at Western to pursue significant change in key areas of our work: in our research impact, and in our community-engaged research; in our work with London and Southwestern Ontario; in deepening the student experience; in working more closely with our affiliate university colleges; in making more of our relationships with the hospitals and the health care community; and in pursuing partnerships that will allow us to achieve greater impact.

GROW STRATEGICALLY

We concluded it will be difficult for Western to achieve much greater impact without growth in its resources.

Growth is not an end in itself, and is not reductively or simply an increase in enrolment.

Our community wants intentional, strategic, and ethical growth aimed at deepening our ability to deliver on our mission. If we want to increase our impact, we must grow smartly in order to transform the opportunities we have to carry out our mission with greater effect.

Western is ready to be more and do more

Increasing the impact of our collective efforts will require several kinds of coordinated growth, which must also be deliberate and strategic.

To reach our goals, Western’s entire ecosystem must grow as one, even if for planning purposes we divide that growth into three interrelated domains:

- **Increase the faculty and staff complements:** To reach our potential we will need to increase our faculty and staff complements. We need more exceptional colleagues to drive our research enterprise, offer innovative academic programs, secure new partnerships, and engage our students.
- **Expand student enrolment:** We will also gradually increase enrolment, as we have been doing for the past three decades, at all levels of study. Over time, we would expect to reach 50,000 students and learners, including undergraduate, graduate, postdoctoral, and lifelong learners. Students are essential to the effort to deepen Western’s engagement in the world, and they are integral to our efforts to create more impact. As a part of this growth, we will create recruitment programs and student-support programs to deepen the diversity of our student body.

- **Secure resources and building infrastructure:** As we grow in people and activity, we must also ensure our physical spaces and human and material supports are adequate to fulfil our educational and research missions.

Investments in recruiting top faculty and students, and building an impact strategy around talent that is broadly supported by physical and financial resources, reveal our commitment to viewing growth as a long-term prospect. For lasting impact, we need to do growth well, rather than quickly.

STIMULATE RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY

Research, scholarship and creative activity are at the heart of all great universities. They have been a hallmark of Western’s achievements from the origins of the university. We have a proud legacy of “firsts” and a long roster of intellectual achievements that have changed the world.

Western is motivated to serve not only individual disciplines but also the public good—by advancing knowledge and sharing it, with traditional methodologies and interdisciplinary ones and through emerging inventions of new methodologies to meet unforeseen challenges. Some of our research will respond to the issues of the day; other forms of research will be devoted to fundamental efforts for which there may be no immediately obvious applications. But all the work contributes to the sum of human knowledge; and some of it will make the world more beautiful or our lives more fully examined.

To support these core motivations, we will take steps to expand support for research, scholarship, and creative activity. Adding to our faculty, staff, and student complements will be one important first step.

Tackling the grand challenges of our time

While individual, curiosity-driven fundamental research and creative practice across the academic disciplines remain a cornerstone of Western, we will also pursue models of collaborative interdisciplinary research that address the most pressing challenges of our time. Among these are the challenges of sustainability, climate change, systemic racism, socioeconomic inequality, threats to democracy, and the imperatives of citizenship.

We will build on Western’s institutes-model by seeking additional ways to organize our collective research efforts. One will be the Western Academy for Advanced Research (WAFAR), to be launched in Fall 2021. WAFAR will create substantial new opportunities to attract distinguished academics to join our community as visiting researchers to work with our faculty and students on pressing challenges from multidisciplinary perspectives.

To support our research, scholarship and creative activity, we will strengthen core facilities and invest in common resources such as laboratories, libraries, studios and technological infrastructure. We will expand our Western research chairs program and find new ways to recognize and promote the achievements of our academic community. We will also continue to invest in our libraries as foundational for all of Western’s research, scholarship and creative activities.

We will seek out new partnerships both internally and externally, and create a partnership concierge model to facilitate these connections.

Internally, we will be more deliberate in connecting expertise from different parts of our community to pursue common projects. We will shift internal research-organization and budget models to achieve greater plasticity in collaborations across boundaries at all levels.

Working together inside and outside the university

We will sustain extant programs to support research across all of our faculties, and we will review how best to support these programs for the future on an annual basis. These include our new or renewed programs in interdisciplinary research, postdoctoral fellowships, programs to support Indigenous research, and programs to support research in the areas of equity, diversity, and inclusion as well as research on teaching and learning practices.

Externally, we have special opportunities and responsibilities in our partnerships with nearby hospitals and regional health partners, and we aim to revitalize those relationships. The hospitals, health partners and the university have had a long-time synergy that needs to be renewed in terms of research and community service, and the time is ripe for that renewal. As health care undergoes significant transformation as a result of pandemic-induced changes, new and important opportunities will emerge.

We will continue to intensify our engagement with industry and step up our outreach to not-for-profit organizations, charitable foundations, municipalities, and other universities to expand opportunities for researchers and students. One goal will be to address community-based challenges and create opportunities for tangible research impact and service, locally and globally. We will create the infrastructure necessary to turn partnership ideas into actions that bring mutual benefits.

Our goal is to stimulate Western's research output and its impact and to ensure the recognition of Western's work—locally, nationally, and globally.

PROMOTE TEACHING AND LEARNING FOR THE FUTURE

Teaching and learning are ancient practices to be celebrated and adapted for each century. The brilliant ways Western's faculty, staff, and students have risen to the new demands of online learning and teaching during the COVID-19 pandemic remind us that these activities are always changing. Our experiences with distance and hybrid education have shown us some of the techniques developed over the last year may well be worth regularizing even as the university community strongly reaffirms its belief in the virtues of hands-on, face-to-face education as the primary locus for our pedagogical efforts.

Western is a destination university for high-performing students, and our retention and graduation rates show we are meeting or exceeding the expectations of our students. We want to sustain an environment of learning and teaching that celebrates intellectual curiosity and that sets the highest standards of creativity and analytic rigour.

Culture of continuous innovation

We already focus on active learning initiatives such as research opportunities, peer learning, co-curricular activities, work-integrated learning, experiential learning and capstone projects to allow students to engage in their own learning. We have created faculty communities of practice to foster pedagogical innovation, and we have increased our support for international experiences to enrich learning. These activities will continue, new opportunities will arise, and they must be supported.

Western currently invests in the scholarship of teaching and learning, provides opportunities for faculty mentoring, and ensures that these “learning ideals” are shared across the ecosystem. All of this will continue, with renewed vigour and commitment.

In collaboration with Western’s Centre for Teaching and Learning, faculty, staff, and academic units will innovate in curriculum design, instructional strategies, and learner assessment; and we will disseminate our innovation and research work in order to solidify our place as leaders in the renewal of post-secondary education.

As digital advances accelerate, it will be essential for the University’s leaders to be open to and supportive of new pedagogical technologies and techniques as they are proposed and developed by faculty, staff, and academic units.

Recognizing the synergy of teaching, learning, and research, we will deepen the integration of research into the academic programs we offer. We will create space for a “grand challenges” approach to teaching and research for those who would like to organize their efforts in this way.

Personalizing the learning experience

Western offers an unusually flexible set of curricular arrangements that allows students to build their own pathways through their education, especially at the undergraduate level.

We will keep that flexibility. It provides differentiation in our degree programs and makes it possible for Western students to personalize their journey and discover their true passions. This often requires extensive engagement with technology, and we will ensure students have the technological tools they need (and expect) both during their studies and beyond.

We will launch new curriculum projects such as the Interdisciplinary Curriculum Initiatives, to ensure our program offerings continue to respond effectively to the current needs of our students. We will invest new resources to strengthen our academic advising program and work jointly with students to understand their needs as we create Canada’s best career preparation program.

Recent experience with the Western Summer Student Internship program has shown the value of student participation in course and program development. We will expand the opportunities for students to partner with faculty in this work.

We will continue to expand our data strategy initiative, recognizing that teaching and learning will always be engaged in the digital world, almost regardless of discipline. Students from across campus must have access to new developments in data analytics, and our data strategy initiative will provide significant opportunities for learning complementary new skills.

Lifelong learning will also accelerate in the coming years, which creates a major opportunity for Western.

At present we serve those learners who want to return to school primarily through the Ivey Academy and our Continuing Studies unit, which offers only courses that bear no academic credit. We will revisit our model for lifelong learning, in collaboration working with the faculties, to better meet the needs of contemporary adult learners seeking to expand their knowledge and skills for professional or personal aspirations with degree-granting credits.

The quality of Western’s graduates has long been a reason for the University’s external reputation. We must continue to ensure that our students are brilliantly prepared for their future. Our impact depends on their impact.

ENRICH THE STUDENT EXPERIENCE

The Western student experience is robust, and a source of great pride. Western graduates are highly sought-after throughout their careers. In part they are in demand because they have acquired exceptional skills as leaders during the course of their studies. These skills are built in our classrooms, libraries, studios and labs, but also in our student clubs, on our sports teams, during intramurals, through the arts, within student government, and across the whole student experience.

The large majority of our students come from outside London, and our first-year residence experience is highly valued. We have invested significantly not only in the facilities used by students but also in the programs that promote the wellness of students, including in mental health services. We will continue to build on our model of “thriving” that is at the heart of our student experience. It is a community of care.

The university hosts hundreds of meaningful co-curricular experiences, student clubs, intramural and varsity sports, music and theatre performances and other creative efforts. As we move forward, we will continue to invest in these opportunities. They contribute greatly to student life.

To sustain this core strength and make it even stronger, we want to integrate more fully the transformative social experiences of our students with other kinds of opportunities—such as the experiential opportunities of work-integrated learning, research with a professor, engagement in entrepreneurship and professional preparation. These engage students in the central work of the university.

We challenge ourselves to understand what it means to complete an academic program in this century, what social and physical elements play in that education, how the digital revolution will alter the opportunities open to our graduates, and how our community may best support our students and prepare them for lives as productive citizens.

We serve multiple populations of students. Their needs may differ depending on their circumstances and aspirations, and we want to revisit how we can best serve our students, whether they are traditional-aged undergraduates, mature students, graduate students or professional students.

Learning by doing

Western will put a new focus on multiplying the avenues students have to pursue a broad array of experiential learning opportunities that contribute to their holistic development and that dovetail with their academic programs. We will:

- Invest in more hands-on applications including more work-integrated learning;
- Fund summer research opportunities for undergraduates; and,
- Extend our current offerings in entrepreneurship to students in all programs.

The aim in all of these forms of experiential learning is to expand the options available to students to enrich their education, and to give students multiple opportunities to experience the joy of research invention, and of exercising the knowledge and skills they are acquiring during their Western experience.

We aim to ensure that every Western student is able to graduate having had at least one intense opportunity for experiential learning.

Enhancing the student experience in this way will help them connect their time at Western to their lives to come.

The expansion of experiential learning recommended in this plan will require robust partnerships outside Western with those organizations prepared to engage our students. We will establish a model of “360-degree” partnerships with companies and organizations on initiatives of mutual benefit such as work-integrated learning, internships and applied research. We will look to our alumni network to help forge many of these opportunities.

For graduate and professional students, we aim to improve access to teaching and research experiences, provide more support for those who wish to complete part of their programs abroad, attract more matriculants from distinguished universities from around the world, and expand recruitment efforts and support for equity-deserving scholars. We will explore boosting the number of professional master’s programs and we will expand the number of master’s and doctoral students on campus. We will make investments in pathways to professional careers for doctoral graduates.

THEME 2 - PEOPLE, COMMUNITY AND CULTURE

Western aspires to lead in the creation of a more just society.

Universities are not a collection of buildings but a community of people—students, faculty, staff, and graduates. This plan has emerged in extraordinary times that have reminded us in so many ways of the importance of community, of genuine belonging, of the relationship of inclusion to equity, and of the power of working together.

Of all the aspirations voiced by the Western community through this planning process, the expectation of a more-inclusive Western stood out, and progress toward this goal will be foundational to our success in reaching the other goals articulated in the plan.

ADVANCE RECONCILIATION WITH INDIGENOUS COMMUNITIES

Western has embraced Universities Canada’s principles with respect to Truth and Reconciliation among Canadian universities, and we will continue to implement our Indigenous Strategic Plan. We renew our commitment to increase Indigenous voices and presence across all levels of community life, work, study and research.

The Western campus is established on the traditional territory of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Chonnocton (Neutral) peoples. Their distinct rights are an important part of our institutional responsibility to Reconciliation, and they are essential partners as we look to the future.

We will increase the recruitment of Indigenous students at all levels as well as faculty and staff, as a part of the university’s efforts to promote Reconciliation. We support efforts of our faculty and staff to consider how to incorporate Indigenous ways of knowing into our curricula and our services to the community.

CREATE A MORE EQUITABLE AND INCLUSIVE WESTERN

To lead our efforts to improve the diversity and equity of our community, we will recruit an Associate Vice-President (Equity, Diversity, and Inclusion), who will be supported by our new Advisory Council on EDI and our EDI Action Network. The Associate Vice-President (EDI) will be a key strategist in helping us develop new efforts and in measuring our effectiveness.

Evolving as a university also means learning from our past. Creating a more welcoming and inclusive experience, particularly for people of colour, and Indigenous peoples, will be critical.

We will continue to strengthen bursary and scholarship programs, fortify existing pathways and create new ones to ensure access to the Western experience for individuals who historically may not have had access to Western. We will review our recruitment and admission strategies alongside our financial aid programs and outreach to equity-deserving groups. We will work to ensure our students see themselves in the leadership of our community. We will strengthen the diversity of our Canada Research Chairs.

These efforts will require new resources, not only for bursaries but also for staff support to strengthen our outreach efforts.

We will embark on a formal program of strategic enrolment management for undergraduate recruitment that will, among other things, attract and retain strong applicants from equity-deserving groups. We will explore a non-traditional approach to evaluating potential in those who may have been overlooked by traditional admissions criteria.

We will provide ongoing opportunities for faculty and staff to develop and learn important practices related to equity, diversity, inclusion and Reconciliation.

We will continue to invest in our ongoing commitments against racism and all other forms of discrimination, including taking next steps following the Anti-Racism Working Group Report of 2020.

In 2021 the university received an external report analyzing the accessibility of our campus and services, including physical accessibility, and the report identified a significant number of improvements that are needed. We will fund new initiatives designed to make accessibility the standard across Western.

Going forward, Western will strive to ensure that our community, our campus, our programs, our research, our outreach, and our self-representation will be more inclusive. We pledge to combat all forms of discrimination. The new Associate Vice-President (EDI) will work collaboratively with the Associate Vice-President (Indigenous Initiatives) and with other campus leaders to achieve measurable progress in these key areas. We will create and fund an EDI Strategic Plan for Western.

Western needs to be more inclusive, and through this strategic plan it will be.

THRIVING THROUGH BELONGING

We will work hard to create an environment that supports all of us in our well-being, our mental and physical health, and our professional and personal development, across all the roles at the university.

The university will continue to mount effective workplace programs and services to support the career and professional development of its staff and faculty. Among these workplace programs are leadership

programs and workplace training that promote safety and well-being, mental health and wellness supports.

Feeling a sense of belonging where you learn and work is so important. In particular, for international students, we recognize that moving to a new country, being away from family and friends, and sometimes learning in a second language can be isolating. Western will stay attentive to the needs of our growing international student population by expanding existing services and supports. Together, we will create a sense of community that makes Western a home away from home.

For our students at all levels of study, the university will offer a broad range of supports both within and beyond our academic programs to encourage thriving and belonging as individuals and collectively. We will continue to pursue the “thriving” model adopted by Western’s Student Experience team. The model focuses on engaged learning, academic determination, positive perspective, diverse citizenship, and social connectedness.

THEME 3 - WESTERN’S PLACE IN THE WORLD

CONCENTRATE ON PLACE, AND . . .

The ever-more digital world raises the question of whether to invest in our physical environment, including academic and research buildings, residences, performance halls, sports facilities, and the like. The response from our community is a resounding *Yes*. We will continue to prioritize a residentially intensive campus for both teaching and research.

London is home

Western is proud to be located in London. We are grateful for all that London contributes to Western’s success. We are an integral part of the community and take the responsibilities that brings seriously. We will continue to contribute to the development and well-being of our city and our region, and to benefit from the great opportunities in working with these communities of which we are an inextricable part.

To that end, we will strengthen our institutional partnerships with the City of London, local and regional schools and hospitals, health care partners, industry, community organizations, and nearby Indigenous communities.

While we will remain a community committed to carrying out our mission primarily face-to-face in London, Western will move vigorously to ensure that we possess all the digital assets we need in order to pursue our mission at the highest level. New technologies will allow us to operate both close to home and far away.

The physical structures and spaces that comprise the Western campus are among our most valuable assets. We want some of our gathering spaces to be less institutional—more funky and distinctive.

We will increase the space for students to gather, improve the quality of study spaces, and create more “collision spaces” such as a newly contemplated “student hub” and the recently approved building devoted to entrepreneurship and makers’ spaces, and a sports fieldhouse to lighten the burden of those long winters and contribute to students’ well-being and good mental health.

We will continue to move forward with the Open Space Strategy to create a safer, more pedestrian- and bicycle friendly, and biodiverse campus. We will launch a new biodiversity project that will bring together our expertise in ecology with the teams that care for our campus and environs, including the river that runs through campus, so that our efforts may become more sustainable and sensitive.

We will complete work on the Thames Hall Wellness Centre and the Indigenous Learning Centre in the Althouse Building. We plan to build a new interdisciplinary research facility to create space for new programs of teaching and research that will also include much-needed new core facilities.

We will engage our affiliated university college partners in a new dialogue about how together we may strengthen our partnership.

We will establish a new presence in downtown London. Likely to be in the core of downtown, the project could house galleries, public-facing clinics, and assembly space in which Western could deliver courses, public lectures, concerts, and poster sessions that share research with the public. We will work with local leaders to define its purpose.

... ENGAGE THE WORLD

Western gets its strength from its roots in Southwestern Ontario, but the curiosity that drives us all also compels us to look to the horizon.

Beyond our main campus and a new downtown London presence, Western (through the Ivey Business School) currently maintains a physical presence in downtown Toronto and in the city centre of Hong Kong. The Schulich School of Medicine & Dentistry maintains a campus in Windsor.

We also anticipate launching or expanding a larger physical presence in downtown Toronto. Its purpose is to deliver advanced professional education and training; to connect with our alumni; and to offer some of our lifelong learning programs and community outreach efforts face-to-face.

Working internationally

The energy that led Ivey to create its Hong Kong campus two decades ago still animates us. As the effects of globalization of higher education continue to deepen, we will see universities investing in physical presences far beyond their main campuses.

We will develop a model to allow us to establish a temporary presence in various international locations, whether field schools, advanced seminars for professionals, or other mechanisms that would make it possible to operate on the international stage in ways that bolster opportunities for our academic community and also contribute to international partnerships with universities and NGOs.

In continuing our work internationally, we will work to deepen existing teaching and research partnerships with international colleagues and promote research mobility. We have pursued student mobility paths for many years, and we will review those paths to ensure that we are offering to our students the most robust international experiences for learning and research.

All serious research-intensive universities strive to attract students from abroad. Great educational experiences require a mix of domestic and international students. That mix makes for the best of both the academic and social experiences for students and brings diverse research strengths and multicultural

perspectives to the entire community. We will attract 20 to 25 per cent of our students from abroad, increasing in particular the ratio of undergraduate students, having already achieved 25 per cent graduate students. We will create a new strategy for international recruitment and aim to populate our academic programs more evenly. These were goals of our previous plan, and we aim to continue them now.

We will invest new resources to ensure success in our broad international efforts. Through these efforts, in part, Western will continue to graduate leaders who can influence and create change around the world.

SUSTAINABILITY, AN IMPERATIVE

Sustainability is one of the grand challenges of our times. It particularly calls out for everyone to collaborate, innovate, experiment—to seek bold and brave solutions.

The maxim “think globally, act locally” applies well to these challenges of sustainability. As a research-intensive university Western is already engaged in a broad swath of internationally significant research projects that link us to a sustainable universe in all of our faculties. At the same time, acting locally, members of the Western community participate in many projects in London and nearby that aim to preserve, protect and nourish the local environs. Our students and faculty are deeply engaged in local social service agencies, schools, hospitals and other sites of important community-engaged learning and research.

In 2020 and in 2021, Western was recognized by the Times Higher Education Impact Ranking as one of the greatest contributors to sustainability research and teaching on the planet.

The Western community wants greater visibility for these efforts, and wants to do more.

We will model sustainable processes in our own operations and apply our research, teaching, learning, and community engagement to support London and Southwestern Ontario in our collective efforts to become the Canadian centre of gravity for sustainability thought leadership and the application of innovative sustainable practices.

Western embraces its responsibility to be stewards of the natural environment. We will launch a collaborative research initiative that will make Western a Canadian and international leader in helping others with research to reduce their own carbon emissions.

We commit to rethinking the care of our campus to encourage greater biodiversity, and to extend efforts to make our campus more of a laboratory for our academic community. We will pursue partnerships with local and regional municipalities whose own projects concentrate on challenges with areas such as water, waste, transportation, and biodiversity.

For years, the university has pursued efforts to reduce its own carbon footprint. These include efforts from food waste to geothermal heating. We will continue to prioritize energy retrofits and maintain our commitment to sustainability for new construction with an aim of net-zero in new facilities.

Western University will achieve net-zero emissions for campus operations by 2050 and at least a 45 percent reduction (over 2005) by 2030. We will incorporate existing initiatives to reduce the impact of campus operations with new initiatives focused on green innovation.

Western researchers, students and staff engage with local communities to assist with socioeconomic challenges related to education, poverty, and health, both in terms of research and services that make a better world for everyone. Western commits to intensifying its engagement with local and nearby municipalities across all of these grand challenges.

The university will survey its academic units to establish the current range and breadth of our curricular offerings in the various areas of sustainability, and we will engage our students as full partners in efforts to ensure that these offerings meet their needs.

Sustainability research happens in all of our faculties and in many research centres across the university. The university commits to significant new sustainability-research funding over the life of this plan to encourage interdisciplinary research that prioritizes opportunities to engage with local and regional municipalities (and/or related service agencies) and that prioritizes experiential learning for our students.

In all of these efforts we will consider how the United Nations Sustainable Development Goals may guide our work.

Western has the capacity, desire, and duty to discover, develop, and advocate for approaches to make our world more sustainable, particularly in the areas of climate change, biodiversity, equity and social justice in which the university has expertise.

SOME MILESTONES AND METRICS

The digital age reminds us that change is constant. As a community we must be attentive to the forces of change and approach our work with a willingness to adapt, adjust, and alter course when necessary.

Some of the milestones and metrics set out below will remain constant. Others will become more specific over time as this plan unfolds.

GREATER IMPACT

- Expand faculty and staff complements commensurate with student growth
- Expand student enrolment to 50,000 by 2030 (undergraduate, graduate, postdoctoral, and lifelong learners) – in areas of demand and societal need and with deliberate intention to be equitable and inclusive
- Secure resources and invest in infrastructure for new buildings, renovations, and Western’s Open Space Strategy
- Increase our national share of funding awarded from each of the Federal Tri-Councils
- Add, and support for ongoing success, 50 research chairs in areas of existing or emerging strength – by 2030
- Increase the number of faculty and staff members who have won national and international awards and similar distinctions for their work in their respective disciplines
- Achieve the highest student retention and graduation rates among Canada’s leading research-intensive universities
- Invest in state-of-the art information technology infrastructure
- Enhance the learning experience by providing a community-based experiential learning opportunity, an international learning opportunity, or a research learning opportunity for all undergraduates who wish to pursue one as part of their degree

- Increase the availability of paid summer research opportunities for students
- Expand and improve lifelong learning offerings (credit and non-credit) to increase our overall cadre of learners at various stages of their lives and careers
- Extend our current offerings in entrepreneurship to students in all programs
- Improve student satisfaction with academic advising
- Increase student utilization of and satisfaction with career development services
- Maintain our stellar graduate employment rate
- Launch the most ambitious fundraising and alumni engagement campaign in the University's history. Build institutional capacity with the goal of increasing annual fundraising to \$100M per year.

PEOPLE, COMMUNITY, AND CULTURE

- Establish a baseline of demographic information for students, faculty and staff to set goals for increased representation among members of equity-deserving groups
- Invest in additional financial supports for students from equity-deserving groups
- Build additional relationships with equity-deserving groups in the local community (e.g. community-facing clinics and services, public lectures, arts and culture events, etc.)
- Increase diversity among our faculty and staff, including the recruitment and retention of Indigenous peoples and members of equity-deserving groups
- Create learning opportunities for faculty and staff on important EDI practices, targeting a 90% participation rate within 5 years

WESTERN'S PLACE IN THE WORLD

- Enhance Western's campus by investing in the quality, accessibility and beauty of our physical environment – showcasing campus as a biodiverse living laboratory (e.g. student gathering/collision spaces, sports facilities, entrepreneurship space, enhanced green space, etc.)
- Establish a new physical presence in London's downtown core
- Establish a larger physical presence in Toronto
- Create and measure the efficacy of having a temporary presence in various international locations (e.g. field schools, advanced seminars for professionals, international partnerships with universities and NGOs, etc.)
- Increase our international undergraduate student population to 20% and out of province students to 15% and provide on-campus supports to ensure their success
- Reduce carbon emissions for campus operations by 45% (over 2005) by 2030 and net zero by 2050
- Create a sustainability research fund (initially at \$1M) that prioritizes our local and regional partnerships and that creates new experiential learning opportunities for students

CONCLUSION

Western has a proud history. We strive to be excellent stewards of our past successes and achievements. As we look to the future, we will push ourselves to increase our impact and move Western to the next level. That impact will come from a renewed research enterprise, a strengthened student experience, a more inclusive community, and more and better partnerships in London and around the world.

This plan closes with a call to action – an invitation to every member of our community to determine how they can contribute to advancing these ideals. Reimagine your program. Rethink your workplace. Strengthen your purpose.

The uncertainty of the global recovery from the pandemic is an invitation to think – and to do – differently. The world needs its leaders to act boldly in the face of seemingly intractable problems and find innovative solutions to them.

In it together

The world's best universities cannot go it alone. They work in partnership to be more creative, more curious, and more innovative. They collaborate to accelerate progress and make positive change.

To achieve the ambitious goals set out in this plan we will need the support of our graduates, our community, and other collaborative teachers and researchers locally and around the world.

In thinking ahead towards Western's 150th anniversary, we are planning today for Western's—and the world's—future.

Join us.

TOWARDS WESTERN AT 150: A SUMMARY OF COMMITMENTS

To grow strategically, we will:

- Expand the faculty and staff complements
- Expand student enrolment
- Secure resources and building infrastructure

To stimulate our research, scholarship and creative activity, we will:

- Strengthen core facilities and invest in common resources such as labs and studios
- Pursue more and deepen existing partnerships locally, nationally, and globally
- Adjust internal organizational structures and the budget model to promote and fund interdisciplinary research and seek greater elasticity in our interdisciplinary mechanisms
- Create a partnership concierge model to open up a portal to serve external partners

To achieve Western's teaching and learning goals, we will:

- Launch curriculum renewal projects to develop new programs that will inspire students
- Improve academic advising and career development support
- Respond to the needs of 21st century learners by executing our online learning strategy
- Ensure technology resources for a changing world are provided

To enrich Western students' experience, we will:

- Offer every undergraduate intensive experiential learning opportunities
- Invest in career development services for undergraduate, graduate and professional students, and postdoctoral scholars, taking Ivey's career services as our inspiration.
- Examine Western's admissions process to ensure we attract a diverse group of students
- Invest in more hands-on applications including more work-integrated learning
- Fund summer research opportunities for undergraduates
- Extend our current offerings in entrepreneurship to students in all programs

To invest in people, community and culture, we will:

- Unite our community through a sense of belonging for all students, faculty, staff and alumni
- Address structural and systemic barriers in support of a more inclusive environment
- Continue our commitment to increase Indigenous voices and presence across all levels of work, study and research
- Create new bursaries for students from equity-deserving groups
- Craft pathways with local and regional school boards and other community organizations to increase our opportunities to recruit students from equity-deserving groups
- We will strengthen the diversity of our Canada Research Chairs
- Create learning opportunities for faculty and staff on important EDI practices

To concentrate on place, we will:

- Strengthen our relationships with nearby communities, agencies and services
- Pursue the Open Space Strategy
- Create a safer, more pedestrian- and bicycle-friendly, biodiverse campus
- Increase the number and quality of student gathering spaces
- Establish a new presence in London’s downtown core to provide service to the community, and enrich arts and culture

To engage the world beyond our London campus, we will:

- Establish a larger physical presence in downtown Toronto
- Increase our international student population to 20-25%
- Double the number of international experiences for our students
- Offer a variety of learning experiences in strategic locations around the world

To deepen our commitment to sustainability, we will:

- Achieve net-zero emissions for campus operations by 2050
- Prioritize and invest in retrofitting existing buildings with energy-saving technology
- Engage with UN Sustainability goals to help guide our work
- Position Western as a global leader in interdisciplinary sustainability research
- Create a new sustainability research fund that prioritizes our local and regional partnerships and that creates new experiential learning opportunities for students

SUMMARY OF CONSULTATIONS

Between September 20, 2020 and April 8, 2021, the Strategic Planning Steering Committee engaged the Western community in more than 90 facilitated consultation sessions to solicit input on Western’s next strategic plan, including multiple opportunities in several faculties and units.

General Consultations

Board of Governors
Don Wright Faculty of Music
Facilities Management
Faculty of Arts & Humanities
Faculty of Education
Faculty of Engineering
Faculty of Health Sciences
Faculty of Information & Media Studies
Faculty of Law
Faculty of Science
Faculty of Social Science
General Student Forums (4)
Hospitality Services
Housing & Ancillary Services
Human Resources
International Student Forums (3)
Ivey Business School
Leaders’ Forum
Office of Faculty Relations
Office of the Registrar
PMA Executive
Police Services and Fire Safety
Professional Network Forum
School of Graduate and Postdoctoral Studies
Schulich School of Medicine & Dentistry
Senate
Senate Committee on University Planning
Student Experience
University Advancement
UWOFA Board
UWOSA Staff Forum
Western Communications
Western International
Western Libraries
Western Research
Western Technology Services

Theme Group Consultations

Alumni Association
Associate Deans Research
Centre for Teaching and Learning
Climate Action London
Climate Crisis Coalition
City of London (Mayor, City Manager, selected Councillors)
City of London Sustainability Managers
Department of Geography and Environment Council, Staff and Student Representatives
Director, Western Sustainability
EDI Action Network
Equity and Human Rights Services
Envirowestern
Executive Director, Network for Business Sustainability
Faculty of Education Curriculum Specialists
Faculty of Social Science Graduate Council and Staff
Indigenous Faculty Advisory Group
Indigenous Postsecondary Education Council
Indigenous Student Centre
London Chamber of Commerce
London Community Foundation
London Economic Development Corporation
Office of Indigenous Initiatives
Pillar Nonprofit Network
President's Advisory Committee on Environment & Sustainability
Research Officers
Residence Council Presidents
Residence Managers
Society of Graduate Students Executive
Special Advisor on Faculty Employment Equity
Special Advisor to the Provost (Indigenous Initiatives)
Students in Gender, Sexuality and Women's Studies course
Students with Accessibility Needs (focus groups)
Teaching Award Recipients (focus group)
Teaching Fellows
Thames Talbot Land Trust
Undergraduate Engineering Society Sustainability Committee
United Way Elgin Middlesex
University Research Board
Vice-Provost (Academic Planning, Policy & Faculty)
Western Continuing Studies
Western Mustang Athletes (focus group)

Surveys

- 1 general survey – January 20 to March 17
- 7 theme-based surveys – January 27 to March 31
- 2 Housing and Ancillary Services staff – March 22 to April 1
- 1 Facilities Management staff – March 22 to April 1

Written Submissions

- 12 written submissions were received from groups and individuals

By the Numbers

- More than 3,700 inputs via consultation participation or surveys
- Over 90 facilitated consultation sessions via Zoom
- More than 700 online surveys completed
- 650+ students engaged
- 2,800+ faculty and staff engaged
- 200+ alumni engaged
- 40+ community members engaged

STRATEGIC PLANNING STEERING COMMITTEE

Thank you to the 37 members of the 2020-21 Strategic Planning Steering Committee. Their unwavering dedication, contributions, insights, and guidance during an already challenging time will have a significant impact on the future of Western University.

Kenisha Arora	Michael Milde
Sue Bennett	Eunice Oladejo
Camryn Bonn	JB Orange
Mark Brown	Adam Pacyga
Jason Brown	WG Pearson
Candace Brunette-Debassige	Sarah Prichard
Matt Davison	Matt Reesor
Keith Gibbons	Lesley Rigg
Alison Hearn	Jennifer Robinson
Volker Hocke	Clare Robinson
Sharon Hodgson	Sophie Roland
Andy Hrymak	David Sandomierski
Nicole Kaniki	kirstyn seanor
Dayana Kibilds	Alan Shepard, Chair
Abdel-Rahman Lawendy	David Simmonds
Deishin Lee	Kasey Van Hedger
Christopher Lengyell	Nadine Wathen
Isaac Luginaah	Chris Watling
Beth MacDougall-Shackleton	

The Strategic Planning Steering Committee was established in October 2020. It included 21 members selected through an open nomination process and approved by Western’s Senate and 15 members appointed *ex officio* or elected by other bodies.

(a) Twenty-one members nominated by an open nomination process and approved by Senate:

- Eleven members representing faculty, ensuring representation from every Faculty
- One member representing postdoctoral scholars
- Three members representing staff
- Two members representing research leaders
- Three members representing the University Students’ Council (USC) (in addition to the *ex officio* member listed below) - *These three positions were open for nominations (including self-nominations) for any undergraduate students, including those in second-entry programs (Business, Law, Education, and Medicine & Dentistry).*
- One member representing the Society of Graduate of Students (SOGS) (in addition to the *ex officio* member listed below) - *This position was open for nominations (including self-nominations) for any graduate student.*

(b) Ten appointed or elected members:

- One member elected by Senate (in addition to the *ex officio* member listed below)

- Two Deans appointed by the Provost
- Two members elected by the Alumni Association
- Two members elected by the Board of Governors
- Three members named by the Chair in consultation with the Chair of SCUP and senior leaders, one of whom will represent the London-Middlesex Community

(c) Six *ex officio* members:

- President & Vice-Chancellor (Chair)
- Provost & Vice-President (Academic)
- Vice-President (Research)
- Chair of SCUP
- President of USC
- President of SOGS

ITEM 9.1 – Status of the Rotman Institute of Philosophy

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

MOTION: That Senate and the Board of Governors approve that the Rotman Institute of Philosophy be established effective June 17, 2021.

EXECUTIVE SUMMARY:

The Rotman Institute of Philosophy supports philosophy in action: engaging with scientists in collaborative research teams to address deep and wicked problems. Part of Western University for over ten years, the Rotman Institute has grown tremendously in terms of faculty participation, partnerships and leveraged funding. The Rotman Institute of Philosophy has not yet formalized its institute status at Western University, limiting the ability to maintain a high level of research activity, and to create a path to long-term sustainability. Becoming a university-level Institute will allow for continuation of the upward trajectory, contributing to Western’s position as a leader in impactful, interdisciplinary research.

Scientists confront deep problems when familiar concepts, or views about how to conduct science itself, no longer lead to progress. Wicked problems arise when a complex challenge must be addressed by integrating scientific knowledge with broader policy goals and societal values. The Institute’s focus on deep and wicked problems aligns with the mandate of several major Canadian funding agencies to support interdisciplinary frontier research. The Institute will enhance Western’s ability to pursue integrative, collaborative research that generates social impact in areas such as the ethical and societal implications of artificial intelligence; ethics and public health policy; and the philosophy of neuroscience.

Within its first decade the Rotman Institute has become a globally recognized research centre for philosophy engaging with the sciences. The vision for the next five years aligns with Western’s core strategic priorities. The Rotman Institute aims to build on its institutional partnerships at Western, and to enhance existing relationships with regional and international Institutes with similar missions. The Institute will build capacity for faculty members to pursue related policy issues based on their work to enhance knowledge mobilization and societal impact for Institute projects.

Alongside external grants (\$10 million generated by nine core members since 2013), the Institute is currently funded by a generous, 15-year philanthropic gift from the Rotman Family Foundation that ends in the 2022/23 academic year. The renewal of philanthropic support will be strongly supported by formalizing institute status – a milestone that has been expressly desired by the Rotman family – as will fundraising efforts with other external sources, such as the Templeton and Trottier foundations.

The Rotman Institute is already enabling world-recognized research that incorporates the tools and independence of mind needed to explore novel approaches to deep problems, and the flexibility and interdisciplinary perspectives to tackle wicked problems. The transition to Western Institute status as outlined in this proposal will build on this impressive track record to achieve long-term vision of exciting and impactful work sustained by an enriching and creative community that is a destination for external

partners. The Institute will continue to fill a unique niche in the spectrum of Western's research strengths by integrating core humanities practice into the development and application of science.

ATTACHMENTS:

[Rotman Institute of Philosophy Proposal for Designation as a Research Institute](#)

ROTMAN INSTITUTE OF PHILOSOPHY

Proposal for designation as a Research Institute

Submitted in fulfillment of procedures for policy MAPP 7.9 --
Establishment, Governance and Review of Research Institutes,
Centres and Groups.

Western 

*Prepared by The Rotman Institute of Philosophy
Strategic Planning Committee
May 30, 2021*

Executive Summary

The Rotman Institute of Philosophy supports philosophy in action: engaging with scientists in collaborative research teams to address **deep and wicked problems**. Part of Western University for over ten years, the Rotman Institute has grown tremendously in terms of faculty participation, partnerships and leveraged funding – we now have 50 faculty members, and our core members have quadrupled the amount of external funding they receive each year in the last five years. However, we have not yet formalized our institute status at Western University, limiting our ability to maintain this level of research activity, and to create a path to long-term sustainability. Becoming a university-level Institute will allow us to continue on our upward trajectory, contributing to Western's position as a leader in impactful, interdisciplinary research.

Tackling Deep and Wicked Problems

Scientists confront **deep problems** when familiar concepts, or views about how to conduct science itself, no longer lead to progress. Contributions by Rotman faculty to deep problems in physics include a seminal critical assessment of the nature and aims of cosmology, and proposals for new concepts needed to describe black holes. Rotman faculty have defended novel organizational principles for the structure of the brain to resolve deep problems in cognitive neuroscience. Work on deep problems in these and other areas builds on the independence and flexibility encouraged by a philosophical mindset.

Wicked problems arise when a complex challenge has to be addressed by integrating scientific knowledge with broader policy goals and societal values. The Institute has a particularly strong track record on wicked problems in health policy and medical research, including the formulation of ethical guidelines that enabled novel types of medical research. The diverse contributions Rotman members have made to the

pandemic response, from serving on policy-making bodies to launching a collaborative national research platform, further illustrate the depth of research talent in this domain.

The Institute's focus on deep and wicked problems aligns with the mandate of several major Canadian funding agencies to support interdisciplinary frontier research. We will enhance Western's ability to pursue integrative, collaborative research that generates social impact in areas such as the ethical and societal implications of artificial intelligence; ethics and public health policy; and the philosophy of neuroscience.

International Standing

Within its first decade the Rotman Institute has become a globally recognized research centre for philosophy engaging with the sciences. Western has built a strong tradition in philosophy over the last half century, acknowledged with top global rankings in areas related to the Institute's mandate. The strength of our research community in philosophy enables us to attract excellent faculty, trainees, and collaborators from around the globe. Rotman trainees now hold faculty positions at top universities on three continents, and Rotman faculty have received several international grants and research awards.

Partnerships

Institutional partnerships contribute to our long term vitality and stability, and the Institute has several fruitful partnerships at Western. The Institute has particularly close ties with the Brain and Mind Institute (BMI), reflected in shared membership and overlapping research agendas, that will continue to yield innovative projects and distinctive training opportunities. There are new collaborations developing with the Institute for Earth and Space Exploration, and several research areas with potential for further work. The Rotman Institute stands out from other Institutes at Western in showcasing the value of including the humanities in collaborative, interdisciplinary teams.

We aim to build on these connections at Western, and to enhance existing relationships with regional and international Institutes with similar missions. Institute faculty collaborate with researchers in top departments and institutes around the world, and we aim to transition

from informal, collegial arrangements to long-term partnerships. Doing so will help us to assemble competitive proposals for large-scale, collaborative grants offered by the New Frontiers in Research Fund, Canada Excellence Research Chairs program, National Institutes of Health (USA), and Tri-Council programs (CIHR Project, SSHRC Partnership, NSERC Alliance). The transition to formal institute status will enhance our ability to form lasting partnerships, and increase our competitiveness for these funding programs.

Institute Goals

1. To foster success for Rotman Institute researchers at all levels.
2. To create a research environment that fosters innovative solutions to deep and wicked problems.
3. To provide distinctive interdisciplinary training for students in the sciences and humanities.
4. To integrate philosophical and ethical considerations into scientific research, the development of technologies, and public policy.
5. To inform and engage the public on deep and wicked problems.

Enhancing Western's Strategic Priorities

Our vision for the next five years aligns with Western's core strategic priorities. We will catalyze new research projects with researchers across campus, focussing in particular on building capacity for research addressing wicked problems. Throughout, principles of equity, diversity, inclusion, and decolonization (EDID) will guide research design for Institute projects. We will build capacity for faculty members to pursue related policy issues based on their work to enhance knowledge mobilization and societal impact.

Expanding a Record of Fundraising Success

Becoming a formal institute will enable a path to long-term sustainability. Alongside external grants (\$10 million generated by nine core members since 2013), the Institute is currently funded by a generous, 15-year philanthropic gift from the Rotman Family Foundation that ends in the 2022/23 academic year. The renewal of philanthropic support will be strongly supported by formalizing our institute status – a milestone that has been expressly desired by the Rotman family – as will alternative fundraising efforts with philanthropic organizations including the Templeton and the Trottier Family Foundations.

The Rotman Institute is already enabling world-recognized research activity that incorporates the tools and independence of mind needed to explore novel approaches to deep problems, and the flexibility and interdisciplinary perspectives to tackle wicked problems. The transition to Western Institute status as outlined in this proposal will build on this impressive track record to achieve our long-term vision of exciting and impactful work sustained by an enriching and creative community that is a destination for external partners. The Institute will continue to fill a unique niche in the spectrum of Western's research strengths by integrating core humanities practice into the development and application of science.

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1 Introduction

1.1 VISION AND MISSION

Where we are going (our aspiration)

We integrate scientific and philosophical analysis to address complex and socially relevant questions.

What we do (our purpose)

The Rotman Institute supports projects that merge philosophical inquiry and science to address the most difficult questions facing humanity. What is the origin of the universe? What is consciousness, and where and how does it manifest? When and how is the use of medical or other forms of technology ethical? How should we prepare for the emerging wave of intelligent technologies? How can we create sustainable models of living on this planet? Such questions can be difficult in two ways. Some questions are foundational, and force us to reconsider the nature of scientific inquiry itself.

Science constantly reinvents itself, revising its aims and methods in light of new challenges. The scientific study of consciousness, or the origins of the universe, may have to proceed in unexpected ways. Other questions touch on so many different aspects of human existence that it is impossible to grasp or address them in isolation. Their resolution requires integrating different disciplines and incommensurate values and perspectives. At the Rotman Institute we specialize in addressing the deep and wicked problems that lie at the intersection of science and philosophy. Such questions can only be addressed by marshalling our efforts across disciplinary boundaries and creating transdisciplinary teams and methods.

What guides us (our core values)

The Rotman Institute of Philosophy is committed to ensuring the social relevance of our work. We are committed to breaking down the barriers that prevent communication between different perspectives, whether these arise between disciplines, between the academy and the public, or within society at large. Philosophers are especially well equipped to do this, for by its nature philosophy focuses on broad questions that span several fields, integrates and synthesizes ideas, and investigates normative issues. Because we recognize that addressing deep and wicked problems requires the confluence of multiple perspectives, we are committed to reaching out to and including myriad voices to help our work progress. This includes a commitment to engaging stakeholders

DEEP PROBLEMS

cannot be solved by continuing to apply familiar concepts and methods. These foundational challenges may stem from taking preceding theories, or views about the nature of science, as authoritative and fixed; in other cases, they reflect a mismatch between methodology and research questions. History shows that an ability to reconsider these assumptions, and to revise the aims and nature of inquiry itself, has been crucial to success.

WICKED PROBLEMS

often arise in policy contexts, when a complex challenge has to be addressed by integrating scientific knowledge with broader policy goals and societal values. A clear and unique formulation of the problem itself is controversial, as candidate formulations reflect background values or a disciplinary perspective. Failures in addressing wicked problems often stem from focusing excessively on an aspect of the problem tractable from a single disciplinary or technical perspective.

outside of the academy, to create mutually beneficial relationships with policy-makers, the public and other knowledge users, building on the principles of reciprocity and trust to increase the relevance of our work to society and, specifically, to addressing social inequalities. We are further committed to the principles of equity, diversity, inclusion, and decolonization (EDID) intellectually, socially and practically, which will be reflected in recruiting participants (at all levels) in Institute projects, providing opportunities and mentorship to our members, and integrating EDID principles in research design. Finally, we are committed to instilling the skills and values, and communicating the importance of interdisciplinarity in the next generation of philosophers and scientists.

1.2 BACKGROUND

Western has been home to a flourishing, internationally recognized program in philosophy of science for a half century. Maintaining this research strength has been a long-term strategic priority, reflected in the commitment of faculty lines (including CRCs) and the designation of philosophy of science as a signature research area. Building on this standing and record of research excellence, Western successfully attracted philanthropic support to establish the Rotman Institute of Philosophy in 2008, with a donation from the Rotman Family Foundation (RFF). The Rotman Institute of Philosophy has pursued an agenda that complements and builds on the research strengths of Western's philosophy department, including applied ethics as well as philosophy of science. In the last four years, in particular, the Institute has made it possible for faculty members from across Western to address new research problems as part of collaborative teams. The external review conducted in May 2019 characterizes the Institute's first decade as enhancing and extending Western's position, leading to our current standing as a global leader.

International Standing

The Institute's global stature has enabled us to attract excellent faculty, trainees and research collaborators. Western's philosophy department consistently places near the top of international rankings of anglophone philosophy departments in several sub-fields (for example, tied for second in foundations of physics worldwide in the 2015 *Philosophical Gourmet Report*). Our core faculty lead research collaborations spanning

the globe. The following projects, placement outcomes, and research outputs illustrate our international standing:

- Rotman alumni (PhD and postdoctoral fellows) now hold faculty or research positions in 7 countries, including leading research universities (Harvard, Oxford, UCSD, Australian National University, and Ludwig-Maxmillians Universität (Munich)), and have won early career research awards such as the Marie Curie Fellowship.
- Michael Anderson's EMRG research group has active collaborations (co-authored journal articles) with scholars in Spain, the USA, the Netherlands, and the UK.
- Charles Weijer's current CIHR-funded project (\$780,300, co-PI with Monica Taljaard, Ottawa) on pragmatic clinical trials includes philosophers, doctors, and public health researchers from the UK, the USA, Australia, and France. Weijer has served on various international advisory committees, including most recently the WHO Working Group for Guidance on Human Challenge Studies in COVID-19.
- The Institute hosts two international research projects in foundations of physics funded by the John Templeton Foundation (New Directions in Philosophy of Cosmology, co-PIs: Smeenk and Jim Weatherall, UC Irvine, US \$ 1.37 million; Quantum Information Structures in Spacetime, co-PIs: Carlo Rovelli (Distinguished Visiting Fellow at Rotman, home institution: Université d'Aix-Marseille) and Christodoulou Marios, US \$2.22 million, with collaborators from 13 institutions, including Institute member Francesca Vidotto.)
- International research awards include the Patrick Suppes Prize (awarded by the American Philosophical Association for an outstanding book in philosophy of science, to faculty member Bill Harper), and the Popper Prize (for the best paper published in the *British Journal for the Philosophy of Science*, to postdoc Rachel Brown).

National Leadership

The external review acknowledged that the Rotman Institute's track record of distinctive interdisciplinary research puts it in a "unique position ... across all of Canada," further noting that "There is nothing else quite like it in the country." The Rotman Institute has established its position as a nationwide research leader in several areas, described in more detail below, as illustrated by:

- Reflecting the Institute's standing in health care ethics, faculty have contracted or collaborated with leading public institutions to tackle challenges in health ethics, law, and policy, such as the WHO, Canadian Institute for Health Information, and Ontario's COVID-19 Vaccine Distribution Task Force (to name a few).
- Western has the highest ranked Canadian programs in philosophy of mind and neuroscience and foundations of physics (according to the Philosophical Gourmet).
- Institute faculty in foundations of physics lead research collaborations with collaborators across Canada, including McGill, University of Toronto, Simon Fraser, Waterloo, and the Perimeter Institute.
- Competitive awards to support PhD students, including two Vanier, one Trillium, and seven Bombardier fellowships since 2013.
- National research awards, such as Fellowship in the Royal Society of Canada (Batterman, Weijer).

Since 2013, we have enhanced the national and local standing of the Institute through supporting these projects and sustaining an active research community:

- The Institute has awarded a total of \$142,000 (since 2008) to support early phases of projects leading to external funding. "New Directions in Philosophy of Cosmology" (co-PI: Smeenk), for example, launched with a \$25,000 catalyst grant, garnered \$2.12 million in total funding from the John Templeton Foundation
- From an average of roughly \$460,000 per year in total external funding awarded to core faculty, we have increased to an average of \$1.9 million per year

in 2018-20. In total, core members of the Institute have generated just over \$10 million in external funds in 2013-2020.

- We have increased from 12 to 26 graduate trainees residing in the Institute, with a similar increase in diversity in disciplinary backgrounds, and have funded collaborations with faculty (\$308,000 in support for graduate students, in total).
- We have maintained a cohort of 4-9 postdoctoral scholars, through internal funding and a variety of external awards. This is unprecedented for a philosophy Institute, and alumni have gone on to faculty positions at UCSD, ANU, and Queen's (for example).
- Since 2010 we have hosted 19 scholars for short-term visits to spur collaborations, and 14 long-term visitors (at least one term), including the internationally renowned physicist and best-selling author Carlo Rovelli.

Path Forward

The 2019 review, conducted by Professors Alisa Bokulich and Kathleen Akins, has an unambiguous central message: the Rotman Institute should become a university-level Institute. The reviewers gave 10 itemized recommendations, listed in Appendix C, which have shaped our formulation of this application.

Becoming a university-level Institute is the logical next step, building on our success and allowing us to recruit more leading researchers to contribute to our ambitious vision. Western granted the Institute space for further growth in the WIRB in 2017. This physical move has helped us to become a hub for interdisciplinary research and training. Leading researchers at Western are drawn to the Institute by, as Rob Corless (Distinguished University Professor, Applied Mathematics) put it, "the ability to pursue new questions falling outside their own disciplines, along with the clarity that philosophical thought brings to familiar problems." This has helped Corless to tackle more challenging questions regarding our use of computers in making reliable inferences and discovering new aspects of mathematics. Similarly, the Rotman Institute has supported researchers from across campus in approaching new research questions that require multidisciplinary perspectives, such as the examples listed below.

CURRENT ROTMAN RESEARCH

Examples of some of the research questions currently pursued by collaborative Rotman research teams.

- *How can we ensure scientific practices and methods are appropriate for generating knowledge?*
- *How can we ensure that automated decision systems (based on machine learning and big data) reflect our democratic values, and advance social justice?*
- *How should health authorities balance the promotion of population well-being with individual liberty?*
- *How can we effectively coordinate rapid-response research, and provide actionable advice to policy makers (such as in response to the COVID pandemic)?*
- *What does social justice require for public health policy and practice, particularly when responding to infectious diseases?*
- *Are deep neural nets a better model for the brain than classic neural networks were?*
- *What is the impact of open science publishing and data sharing practices on scientific progress?*
- *What information do organisms use to coordinate with their environments, and how does brain activity reflect this information?*
- *How should the best interests of children who do not have health decision-making capacity be promoted through a 'best interests' standard?*
- *How might we best coordinate an interdisciplinary treatment response to mental illness?*

In the next five years, we will furthermore support the development of research projects of broader scope, and seek funding through large-scale, collaborative grants. As a university-level Institute, the Rotman Institute would be able to much more effectively catalyze the early stages of development of appropriate projects through seed grants; assemble research teams with appropriate expertise and skills; and provide staff support for the development of proposals and management of successful awards.

1.3 INTELLECTUAL AGENDA

Philosophical training sharpens critical thinking skills, such as the ability to detect subtle gaps in standard views, to characterize concepts precisely, and to explore and develop radically new perspectives. Systematic philosophical work integrates insights and methodologies from the humanities and the sciences. This combination of incisive analytical skills and breadth of research questions bridging different traditions accounts for philosophy's enduring vitality and impact.

The Rotman Institute harnesses the distinctive capacities of philosophy, by supporting a specific kind of interdisciplinary work: philosophy in action, engaging with scientists in collaborative research teams to address deep and wicked problems.

Frontier Research in Physics

Frontier scientific research often encounters deep problems that cannot be solved by continuing to apply familiar concepts and methods. Several current Rotman Institute projects contribute to deep problems that arise in frontier research in physics. Chris Smeenk's work assesses the philosophy underlying contemporary cosmology. Enormous progress in cosmology over the past century has raised basic questions: for example, in what sense can we explain the origin of the universe? Answers to such philosophical questions have shaped the development of the field, while at the same time provoking foundational debates among cosmologists. Francesca Vidotto's research in quantum gravity requires rethinking the basic concepts of space and time, in order to develop concrete models of the early universe and black holes and evaluate their further implications. Rob

Corless's interactions with philosophers spurred him to reflect critically on when we can trust the solutions computers give us, leading him to develop an area of applied mathematics called backwards error analysis. More broadly his current work regards computational epistemology, assessing the strengths and limitations of what numerical methods and simulations can contribute to scientific practice.

Deep Problems in Neuroscience

Core members Mike Anderson, Jackie Sullivan, and Chris Viger, pursue deep problems in neuroscience. Decades of work in neuroimaging have led to a series of anomalous findings, indicating potentially significant problems with the foundational assumptions of cognitive neuroscience. Anderson and his group have been developing new theoretical frameworks for understanding the nature and functional architecture of the brain, new mathematical techniques for analyzing and interpreting data, and new uses for existing technologies (including EEG and Virtual Reality). They have also been pushing the field to move away from “brain-centric” investigations toward “organism-centric” approaches to the understanding of cognition and behaviour, which necessitates more intense collaboration across disciplinary boundaries. Progress in understanding the neural underpinnings of cognition and mental illness depends on the ability to integrate discoveries obtained using various distinctive methodologies. It also requires scientists to be transparent about the methods they use and to share their data openly. Sullivan aims to understand the practical challenges associated with developing coherent integrative explanations of cognitive and psychopathological phenomena, and the impact that open science knowledge and data-sharing practices have on accelerating discovery. She collaborates with Western neuroscientists Tim Bussey, Marco Prado and Lisa Saksida, along with researchers from Peking University in Beijing. Viger is developing what he calls the “acquired language of thought hypothesis,” correcting an influential philosophical account of the nature of language based on insights from neuroscience. He will further consider the impact of this view for phenomena such as implicit bias, and its implications for more effective critical thinking pedagogy.

Wicked Problems in Policy

We are witnesses to our society's response to an exemplary wicked problem — namely, how to balance public health priorities with other policy goals in a pandemic. The pandemic has highlighted the need for an integrated approach that leverages scientific understanding to design an effective public health response. The differential impacts of both the virus and the public health measures on communities – for example, the effects of sustained school closures on women and low-resource families – make clear the need for prescient and explicit values-based priority setting as part of this process. In this case, the public health and policy communities were not well-positioned to serve this function, as they were fully engaged with the developing crisis, and furthermore did not have the requisite expertise or broad perspective.

This case illustrates a common shortcoming in addressing wicked problems. Wicked problems are often mistakenly treated as one-dimensional, with a feature of the problem more tractable from a given disciplinary perspective considered in isolation. Many traditional philosophical problems are wicked, and philosophers are particularly aware of the pitfalls of oversimplification and failing to integrate different perspectives. Conflicting perspectives on the problem lead to, for example, different metrics to evaluate the success of proposed policy interventions. Philosophical analysis can help to identify assumptions about values reflected in these metrics, which often are not acknowledged as an explicit choice subject to evaluation, debate, and revision.

Addressing climate change and the ongoing biodiversity crisis present two other exemplary wicked problems: it is very difficult to even come to agreement on the nature of the problems, or whether a specific aspect of the problems can be treated effectively in isolation. Any proposed responses have to face complexity, uncertainty, and profound ethical challenges, not to mention the difficulty of communicating the urgency of these policy initiatives to the public. Eric Desjardins' work explores the implications of social-biological entanglement and historical contingency for problems such as biological conservation, climate change mitigation, and sustainability.

Intersection of Health Policy & Medical Research

Addressing wicked problems at the intersection of health policy and medical research has been one of the Institute's strengths since its founding. One of the signature achievements of the Institute's first decade was the formulation of the world's first ethical guidelines for conducting cluster randomized trials, which randomize and assess interventions over intact social units rather than individuals. Weijer was a co-leader of the interdisciplinary team that wrote these guidelines. He currently co-leads a team focusing on formulating ethical guidelines for conducting pragmatic clinical trials, designed to yield more reliable evidence regarding safety, effectiveness, and cost of treatments in real-world settings. Weijer's recent work on challenge experiments has been particularly valuable and has had broad impact, including frequent media appearances and membership on a WHO working group. The second core member working in this area, Anthony Skelton, has sought to clarify how medical interventions continue to impact values and concepts, including achievement, consent and decision-making capacity. He is part of an interdisciplinary team investigating the nature of children's consent in ethics and the law, building in part on his previous work on the nature of well-being. More recently, Skelton has focused on the ethics and policy of mandatory vaccination. Together with associate members Max Smith and Lisa Forsberg he is investigating the conditions under which it is justified to mandate vaccination for health-care workers, and for society more generally.

The Institute has developed a stronger research profile in public health policy with the recent addition of associate members Max Smith and Jacob Shelley, co-directors of the Health Ethics, Law, and Policy (HELP) Lab in the School of Health Studies. Smith has received funding to work on ethical pathways for therapeutics and vaccine R&D in the context of a public health emergency. He has written on many ethical issues relating to the current pandemic, including publication ethics in pandemics and the distribution of scarce medical resources. Smith currently sits on the Province of Ontario's Bioethics Decision-making Table and works with the WHO. Associate faculty member Sarah Gallagher is a co-PI on the CoVivre Initiative (funded by the Trottier Foundation), which aims to: (1) enhance protective measures for at-risk communities, (2) mitigate collateral effects on

mental health and social well-being, and (3) reduce inter-community conflicts associated with the pandemic, focusing on Montréal. We aim to support continued growth of the Institute's research profile in public health policy and research ethics.

Unexpected Consequences of Innovation

Scientific innovations and new technologies can also trigger changes that call for philosophical reflection and analysis. When they are first introduced, successful technologies make something that we were already doing easier. Yet some technologies trigger a transformation, changing the nature of the activity itself in profound ways. Social media companies initially offered tools to maintain contact with friends, for example, but have transformed how most people learn about the world – with enormous unanticipated negative impact on public discourse and trust in institutions. The new capacities for action that technology creates may generate entirely new ethical issues, or require rethinking basic concepts and assumptions. We are witnessing the consequences of failing to prospectively identify and anticipate the ramifications of new technologies.

Within the last three years, the Institute has supported two emerging research projects regarding the implications of scientific innovation and new technologies. The first regards synthetic biology; the developing technical capacity to engineer, design, and build biological systems. Desjardins has collaborated with the synthetic biology group at Western to consider the broader ramifications of this ground-breaking work, specifically regarding its implications for health and environmental issues. These are examples of disruptive technologies where historical contingency and socio-biological entanglement play an important role in guiding both research activities and regulation of their application. The second emerging project regards the ethical and societal implications of Artificial Intelligence (data analytics and machine learning algorithms). Rotman members (in particular Anderson, Jacquelyn Burkell, Carolyn McLeod, Smeenk, and postdoc Bartek Chomanski) have contributed to developing new curriculum at several levels, and creating an interdisciplinary reading group that led to an emerging IDI proposal.

Institute faculty have also led efforts to coordinate and integrate research efforts across diverse fields, and to

develop new ways to put reliable information into the hands of decision makers, community leaders, and the general public, in response to the pandemic. Associate members Gallagher and Mark Daley were co-founders (along with two others) of CanCOVID, a country-wide rapid-response network to facilitate coronavirus research, collaboration, and communication. CanCOVID was mandated by the Office of the Chief Science Advisor and supported with a \$ 1.25 M investment by Innovation, Science and Economic Development Canada as well as Health Canada, to help coordinate scientific evidence needed in the fight against COVID-19.

1.4 PARTNERS

Western Institute for Neuroscience

The Rotman Institute has developed a fruitful strategic partnership with the Brain and Mind Institute (BMI), now part of the Western Institute for Neuroscience, enhanced by co-location in the WIRB. The overlap between members of the two Institutes – with 4 out of 9 core members of the Rotman Institute also members of the BMI – reflects our shared mission. This relationship has led to innovative research projects along with distinctive opportunities for trainees in both Institutes. Several collaborations have allowed researchers to extend to new research topics and enhance impact. For instance, moving forward on the “organism-centric” approach to cognitive neuroscience mentioned above requires devising more realistic environments and tasks, which Anderson and his group pursue in collaboration with the Culham ARI (Actions and Real World Imaging) lab. From 2014-2018, Adrian Owen and Weijer led a neuroethics research group bringing together faculty and trainees from both Institutes to explore ethical questions raised by neuroimaging after severe brain injury. More recently, Sullivan has joined the Translational Cognitive Neuroscience Laboratory (PIs: Bussey and Saksida) as part of a SSHRC-funded project regarding the scientific practice of neuroscience. Anderson’s EMRG research group works particularly closely with several BMI members, in pursuing empirical investigations alongside more philosophical work. The two Institutes have regularly co-sponsored speakers, visiting fellows, and international conferences. Before the onset of the pandemic, the two Institutes regularly hosted coffee breaks and other meetings to stimulate further projects and collaborations. Researchers in the two Institutes have also worked closely together as a result of the

Lab Associates program, a distinctive training initiative described below. In short, maintaining this productive strategic partnership enhances the research and impact of both Institutes.

Institute for Earth and Space Exploration

Several institute members are also members of the Institute for Earth and Space Exploration. Two ongoing collaborations reflect the synergies between the two Institutes. The first is a successful 2020 Western Space seed grant proposal led by Rotman member Smith, co-I Skelton, on “Heath Ethics in Space: Toward a Research Agenda for Space Bioethics.” This project has clear real-world applications for human deep space exploration which have become directly relevant with Canada’s declared partnership with the US in the Lunar Gateway program. Rotman and Western Space are also co-sponsoring the policy forum on Space as a National Asset for Canada (originally planned for June 2020, but delayed by the pandemic until it can be held in person), structured as a pilot model for such events that will use design-thinking inspired workshops led by graduate students to deliver policy white papers on the uses and benefits of space for Canada. The growing use of Earth observations data to characterize climate change effects and monitor emissions and the expansion of artificial intelligence to manage deep space healthcare and operations would be additional fruitful domains for future joint projects with Western Space.

Perimeter Institute for Theoretical Physics

The Institute has informal relationships with a variety of other research institutes in the region and globally. We have jointly hosted conferences and workshops with the Perimeter Institute for Theoretical Physics in Waterloo, and there have been regular contact among faculty members in both Institutes. We have strengthened these connections due to Vidotto’s arrival, because she has close research ties to several faculty members in the Perimeter Institute. We will revisit the possibility of closer ties with the Perimeter Institute and how that could contribute to the Rotman Institute’s research and training goals. We have similar informal connections with several other research institutes globally, typically mediated through research collaborations among individual faculty members. We will aim to establish stronger relationships, supporting further research collaborations and training opportunities, with appropriate counterparts.

2 Contributions to Western's Mission

The Rotman Institute leverages Western's decades-long legacy of research strength in philosophy of science in alignment with the core priorities of the University's Strategic Plan.

Leadership through Interdisciplinary Research

Funding agencies at all levels have prioritized support of interdisciplinary research, and the Rotman Institute's track record in research and training will enhance Western's leadership role in pursuing these initiatives. The focus on deep and wicked problems crosses disciplinary domains and offers versatility and complementarity to other research institutes already established. Perhaps uniquely among existing Western Institutes, humanities and science scholars will be present on every project team. Teams will be further rounded out by scholars from other domains including information and media studies, engineering, and social and health sciences. The Institute membership already encompasses members from eight faculties: interdisciplinarity is inherent in its mission and vision.

Embedding Equity, Diversity, and Inclusion in our Research Culture

Our commitment to EDID principles is reflected in our sustained effort to create a diverse and inclusive research community, and to address obstacles to full participation in this community faced by our trainees and colleagues from under-represented groups. (Specific plans for embedding EDID principles in practice are described in Appendix G below.) The track record of our graduate and postdoctoral alumnae reflects our success

in doing so, in at least one regard: we have consistently exceeded disciplinary norms for participation by people from under-represented groups, in decisions made by the Institute such as hiring of postdoctoral fellows, and invitations to speakers and visiting fellows. Furthermore, EDID principles motivate and shape the design and implementation of several Institute projects. As emphasized above, wicked problems are often rendered more tractable by focusing on a narrow technical issue, while setting aside broader questions and excluding relevant concerns. One developing project on algorithmic impact assessment illustrates this point particularly clearly. Governments have become increasingly invested in developing automated decision making systems, based on machine learning algorithms applied to big data sets. There are many appealing features of these systems (including efficiency and lower cost), but the downstream impacts of their widespread use is challenging to assess and varies across different groups. In particular these systems often perpetuate, rather than correct, historical patterns of discriminatory sorting and exploitation. The IDI project (PI: Luke Stark) supports the design and implementation algorithmic impact assessments, on the model of environmental impact assessments, in order to ensure transparency and accountability to the public.

Mobilizing Knowledge

The primary expansion of the Institute's activities outlined in this proposal will develop further capacity for the application of research in philosophy engaged with science to directly impact policy. Explicitly offering training to faculty in the tools, landscape and language of policy, connecting with organizations with a policy focus, and sponsoring hosting of and attendance at policy forums will enable achievement of this goal. We will build on the expertise of our faculty members who pursue policy impacts. For example, the members of the HELP lab have developed collaborative relationships with a variety of different public health groups, from government agencies to advocacy groups, which has helped them to more clearly identify the needs of different knowledge users. As part of our commitment to EDID principles, we will strive for an inclusive approach to identifying stakeholders and to engaging with them. The project funded by the Trottier Foundation (co-PI: Gallagher), for example, prioritizes communication with communities with low levels of trust in public institutions resulting from historical injustices. We will continue to support policy work in this area, while also developing this expertise

for other groups within the Rotman Institute. We will work with the Knowledge Exchange and Impact Team at Western Research to identify success metrics that align with the Institute's objectives and the objectives of external stakeholders. In addition, we will design outreach activities that inform and engage the public and take research activity out of the academy, to increase the reputation of the Institute and mobilize knowledge for societal benefits.

Going Global

Rotman projects by nature cross national boundaries: problems such as developing ethical frameworks for climate change adaptation and mitigation, exploring the nature and origins of consciousness, and incorporating values into technology design are not specific to one country. Rotman faculty already have strong international collaborations and are being supported by global funding organizations (such as the Templeton Foundation). At present, the Institute is a destination for postdocs from abroad with independent funding, and a destination of choice for senior scholars through our visiting scholars program. The transition to institute status will enhance the Rotman Institute's international stature as a valued partner in projects with global reach.

Preparing Global-Ready Graduates

Training in philosophy of science and ethics develops scholars characterized by their ability to abstract and generalize technical challenges and identify weaknesses in practice that are often blind spots for scientists. As acute and critical observers of the process of science, and questions regarding values implicated in scientific discoveries, they can independently evaluate where scientific tools (such as standard statistical tests or computer algorithms) are inadequate or being inappropriately used. They can recognize that technology applied without prior thoughtful consideration and evaluation can have unintended and inequitable negative consequences. They thrive on dealing with uncertainty and tangled, difficult intellectual challenges that leave many scientists at a loss. In addition to these skills, the value-added for Rotman Institute alumni will be the experiential learning of being embedded in teams tackling deep and wicked problems of global significance. This will put them in direct contact with multidisciplinary networks for their future career development. In addition, the explicit training in the communication practices of

government (e.g., how to distill a complex technical issue into a policy recommendation in a briefing note) will be a valuable skill set for service in the public sector in Canada or abroad.

Partnerships with Impact

The productive interplay between the Rotman Institute, Western Space, and the Western Institute for Neuroscience will powerfully enhance the research potential of each Institute, as described above. The transition to institute status will also enhance our ability to move from informal arrangements, mediated by interactions among individual faculty members, to long-term partnerships with regional and international partners with similar missions.

Opportunities for Philanthropic Support

Philanthropic organizations have mobilized in the wake of the pandemic and other large-scale crises to fill in gaps where the machinery of government does not allow agile experimentation to find innovative and effective solutions to difficult problems. The type of work that will be supported by the Rotman Institute fits within this mandate; projects led by Rotman faculty have already been identified as serving the mission of philanthropic organizations (including the Templeton and the Trottier Family Foundations). Elevation to Institute status will increase the competitive advantage for Institute-led projects by reducing the risk to foundations that projects will not have sufficient support to follow-through on their proposals.

3 Goals

The Institute will pursue five goals related to research, teaching, and societal impact. For each goal we characterize how the creation of a university-level Institute adds value, enabling us to pursue more ambitious objectives and enhance our contribution to Western's mission. Appendix E describes in more detail the outputs, outcomes and mechanisms associated with each of these goals, summarized in Table 3.

3.1 RESEARCH

To foster success for Rotman Institute researchers at all levels.

We have already established the Rotman Institute as a premier research destination, with a critical mass of active researchers and trainees in several research areas, and a positive, collaborative research environment. We will build on this success and take the Rotman Institute to the next level by: increasing the capacity to create global, interdisciplinary collaborations; recruiting top junior scholars; maintaining a global Rotman research network; increasing the diversity of Institute membership and ensuring a positive workplace environment.

To create a research environment that fosters innovative solutions to deep and wicked problems.

The Rotman Institute will catalyze interdisciplinary projects, through connecting researchers with diverse expertise and removing barriers to effective collaboration. Our vision is to establish the Rotman Institute as the hub of a dynamic research network. Nodes in this network, consisting of researchers with relevant expertise, will form around specific challenges, then disperse as the project draws to a close and their members form new nodes. We will select the projects with the greatest potential for impact, and seek support for a longer period of focused collaborative research

through large-scale grants or philanthropic fundraising. To achieve this vision we will: increase capacity to identify challenges and recruit members for interdisciplinary research teams, and enhance development of long-term interdisciplinary research teams.

3.2 TRAINING

To provide distinctive interdisciplinary training for students in the sciences and humanities.

Since its founding the Institute has offered distinctive training modeled on the sciences, with graduate students joining collaborative research groups alongside faculty members and postdocs. Participating in a truly interdisciplinary research environment adds value to graduate training in other senses as well, by developing professional skills through collaboration, communication with diverse audiences, and networking across disciplines. This broad training has served Rotman graduates well, in particular for those who have put their skills to use in the business world and the public sector. Our success in graduate recruitment and placement record reflects the value added by this training, in terms of research output and leadership skills. We will build on existing training initiatives over the next five years in pursuing two objectives: building capacity of trainees to pursue problems across disciplines, and integrating trainees at all levels into interdisciplinary research teams.

3.3 SOCIETAL IMPACT

To integrate philosophical and ethical considerations into scientific research, the development of technologies, and public policy.

Rotman faculty members are well-positioned to make distinctive contributions to wicked policy problems, through integrating ethical considerations and advocating for a more inclusive approach. We will develop the capacity for Institute faculty to engage with policy work through training and networking (with local and international partners), as well as raising the profile of Rotman faculty working in these areas.

To inform and engage the public on deep and wicked problems.

Building on a variety of successful activities, including an annual public lecture series, active social media presence, and regular contributions from Institute faculty in venues such as The Conversation, we aim to reach a larger audience. We will seek more opportunities for a productive mutual exchange rather than merely dissemination, and provide training and incentives for Institute members at all levels to pursue public outreach.

4 Membership

The Institute's success will depend on maintaining a committed group of core faculty, complemented by a dynamic faculty cohort that joins the Institute to pursue specific research projects. Flexibility and openness to new members will be crucial to maintaining the vitality of the Institute and catalyzing new projects. We have recruited new associate faculty members from across Western as the Institute's work has extended into new areas. The Rotman Institute currently has 50 faculty members, including nine core members and 41 associate members from a variety of disciplinary backgrounds. Sixteen associate members have primary appointments at other universities or Institutes. We propose two changes to existing practices. First, we will expand the cohort of core faculty, from 9 to around 15-20, to reflect the level of participation and engagement of several associate members, while also refining the benefits and obligations of membership. Second, we will create a category of "external associate" members to more accurately characterize the obligations and responsibilities of our members from outside Western.

The Rotman Institute is committed to equity, diversity, inclusion, and decolonization (EDID) in our membership, as an essential part of creating the intellectual

environment needed to achieve our goals. We strive to meet Canadian Research EDID standards by supporting equitable funding opportunities, promoting diversity, and increasing inclusive participation in research and institute decision-making. To facilitate the continuous renewal of ideas and approaches, we will recruit members for both permanent and rotating membership and residence at the Institute. As we manage this expansion we will, consistent with our core values, seek to increase the representation of people from groups currently un- or under-represented at the Institute. We seek diversity along multiple different axes, including race or ethnicity, gender, sexual identity, and career stage.

4.1 ALTERNATIVE WORKLOAD AGREEMENTS

No alternative workload arrangements are proposed for Institute faculty members. Researchers who contribute to governance, either as Director or Associate Director, should receive accommodation for their service workload through their home Department or Faculty. The Director's position is expected to require 30-40% of their workload, requiring (at least) one full course teaching release; currently the Associate Director receives a half-course teaching release.

4.2 OPPORTUNITIES FOR FACULTY GROWTH

The Rotman Institute aims to enhance Western’s ability to pursue integrative, collaborative research with greater social impact. One essential step towards reaching this goal is to hire more researchers with the appropriate training, skills, and orientation to take the lead in this style of work. Decisions about faculty hiring are made by departments and Deans, not Institutes. Our role is to help identify opportunities and recruit excellent new faculty

members. In that spirit, we have identified three areas where additional faculty resources would have immediate impact: the ethical and societal implications of artificial intelligence; ethics and public health policy; and the philosophy of neuroscience. If we have an opportunity to assist in recruiting new faculty, we will prioritize EDID goals. We acknowledge the importance, as emphasized in Western’s action plan for Canada Research Chairs, that the research areas for any searches should be construed broadly to ensure a diverse applicant pool.

Figure 1. Faculty & department affiliations of core and associate faculty members at Western University

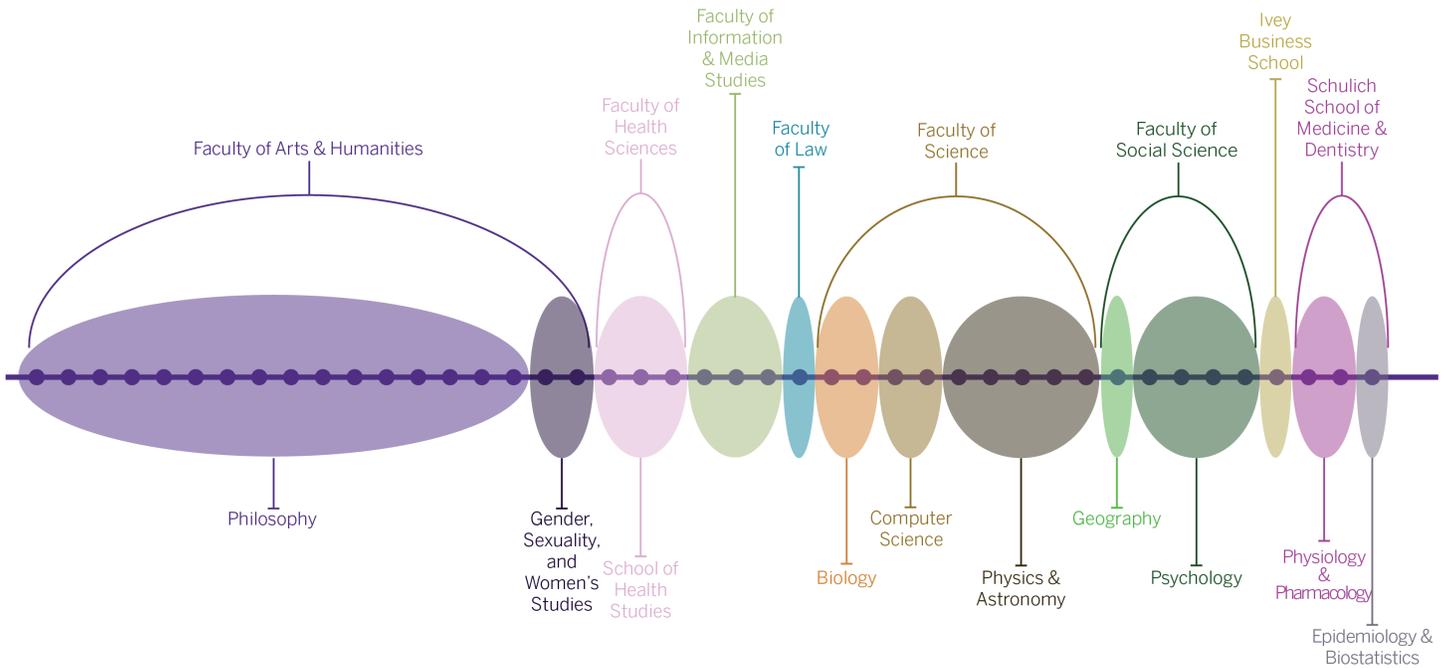
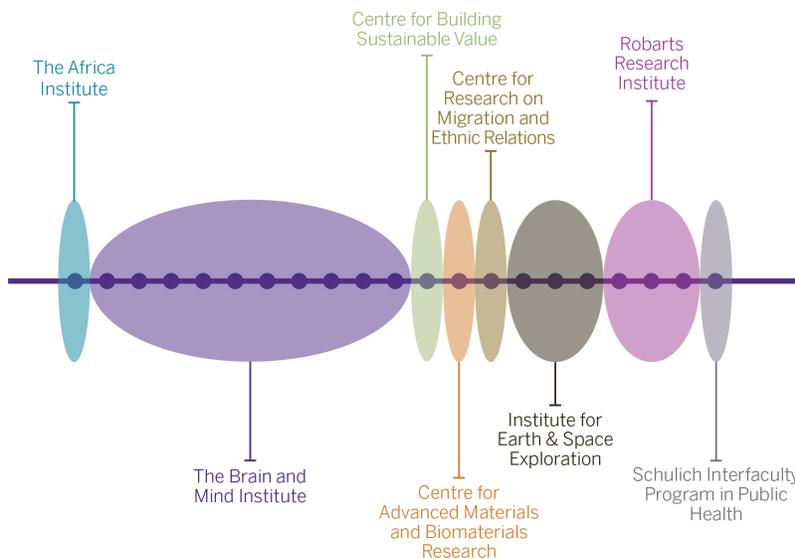


Figure 2. Western Research Centres & Institutes that include Rotman core and associate faculty members



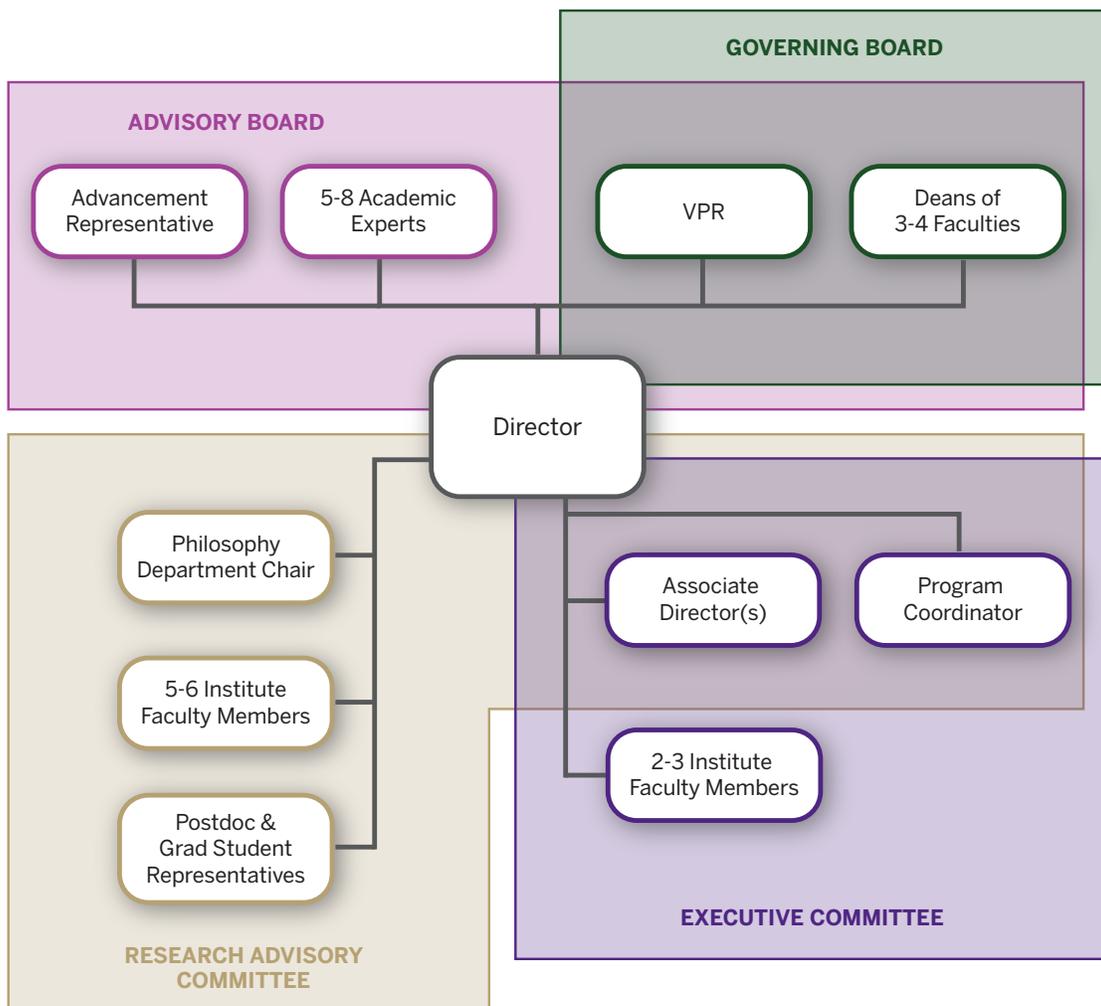
5 Governance

The executive team for the Institute will include a Director (faculty), one or more Associate Directors (faculty), and administrative officer(s) (staff). The Director will have primary responsibility for fulfilling the Institute's Vision and Mission, including managing the budget and setting strategic priorities. The Director will oversee the team, assigning specific portfolios and duties to the Associate Director(s) and the staff members.

The Director will report directly to the Vice-President Research (or designate), and to the Institute's Governing Board. The mandate of the Governing Board, chaired by the Vice-President Research (or designate), will include sign-off authority on Institute programs, annual approval of the budget, and review of vision and strategy and metrics for evaluating success. The Director will act as the liaison with the Governing Board and the Advisory Board, whose mandate is to provide advice on strategic priorities. The Director will chair two committees that meet regularly during the academic year: an Executive Committee that will provide oversight for day to day operations, and a Research Advisory Committee that will provide insight and guidance to the Director and Executive Committee from the research community.

The governance structure is depicted in the organizational chart below, with further information about the mandates, responsibilities, and selection process for administrative officers and committees in Appendix F.

Figure 3. Proposed Organizational Chart



6 Financing and Support

6.1 MANAGEMENT OF FUNDS

The Director will oversee and manage Institute funds, based on a budget approved by the Governing Board. The budget will be reviewed and approved annually by the Governing Board, based on input from and consultation with all Institute faculty. The new budget proposal will be presented alongside a financial report for the previous year. The Institute will comply with Western University's guidelines for the use of funds and reporting and auditing requirements.

Faculty members of the Institute will not receive direct remuneration from the Rotman Institute. Staff members will be paid from the Institute's budget in accordance with Western University's HR policies, managed by Western Research. Membership on the Executive Committee, Research Advisory Committee, and the roles of Director and Associate Directors are voluntary, and performed as part of the Members' service workload.

6.2 CURRENT AND PROPOSED FUNDING

The Institute currently has an annual discretionary budget of just under \$500,000. Our proposed budget supports continued growth from this starting point to annual expenditures of roughly \$540,000 by 2025-26. The projected expenditures and sources of funding are listed in the accompanying tables, with further detail regarding expenditures provided in Appendix D.

The generous donation from the RFF covers roughly 80% of the Institute's expenditures until the end of the original donor agreement in 2023. We propose an additional \$215,000 from Western Research and the faculties during this period.

After 2023, we have divided our projected expenses into core expenses, essential to the operations of the Institute, and funding for research initiatives and knowledge mobilization. We propose to use internal funds from Western Research and the faculties to cover the core expenses, in particular personnel and operating expenses. Doing so will provide continuity and stability to the research community, and support the preparation of competitive and innovative proposals for external grants. The funding rate increases to an average of \$177,400 per year from Western, with \$51,700 from Faculty commitments and \$126,700 from Western Research. This level of funding will be sufficient to sustain the core activities of the Institute past 2023. For the sake of concreteness, the budget model assumes that we will continue to support research initiatives and knowledge mobilization at the same scale (with modest growth). To do so we will need to bring in additional funding of just over \$250,000 per year.

6.3 PLANS TO SECURE ADDITIONAL FUNDING

In order to successfully implement the goals outlined above, the Rotman Institute will actively seek further sources of revenue. We will continue to accelerate grant funding awarded to individual members. We will target large collaborative grants (such as the New Frontiers in Research Fund competitions, SSHRC partnership grants, and similar opportunities), and leverage current funds to support competitive applications for these programs. We will continue to work closely with Western's development team to pursue philanthropic support, including seeking a more diverse array of funding possibilities in addition to the RFF.

The current budget projects external support continuing at a more modest scale than our current funding from the RFF. Philanthropic funds would allow us to continue to pursue our current approach to supporting the research community, with internal funds available to recruit new members and catalyze new projects. In particular, we would be able to continue to support faculty members at early career stages, and implement practices that align with our EDID goals. If we are unsuccessful in obtaining these funds at this scale, we will rely on grants awarded to individual faculty members, teams, and large-scale collaborations as a source of support for postdoctoral fellows and staff positions. Since we have already secured philanthropic support for Years 1-2, this would be necessary beyond Year 2.

Table 1: Projected Expenditures

(See Appendix D for a more detailed breakdown and description of expenses in each of these categories.)

Projected Expenditures	2021 - 22	2022 - 23	2023 - 24	2024 - 25	2025 - 26	Total
Personnel	\$131,166	\$135,101	\$139,154	\$143,328	\$147,628	\$696,376
Research Initiatives	\$289,349	\$285,922	\$282,517	\$290,992	\$299,722	\$1,448,502
Knowledge Mobilization	\$44,056	\$45,378	\$46,739	\$48,142	\$49,586	\$233,901
Operating Expenses	\$41,217	\$42,310	\$43,471	\$44,667	\$45,899	\$217,563
	\$505,788	\$508,710	\$511,881	\$527,129	\$542,835	\$2,596,342

Table 2: Funding by Source

(RFF and Existing Funding includes funds from the 2008 agreement and other sources, including income from an endowment extending in perpetuity. See Appendix D for further details.)

Funding By Source	2021 - 22	2022 - 23	2023 - 24	2024 - 25	2025 - 26	Total
RFF & Existing Funding	\$406,498	\$392,997	\$49,000	\$49,000	\$49,000	\$946,495
Western Research	\$65,457	\$80,990	\$156,049	\$160,622	\$165,333	\$628,452
Western Faculties	\$33,833	\$34,722	\$60,007	\$63,277	\$66,646	\$258,485
External Funding	\$ -	\$ -	\$246,825	\$254,229	\$261,856	\$762,910
	\$505,788	\$508,710	\$511,881	\$527,129	\$542,835	\$2,596,342

7 Staffing Requirements

To pursue the projects and initiatives described above, Institute members will need to be supported by a team of dedicated staff. The external review highlighted the need for staff support as their first, and most forceful, recommendation. Our staff needs will increase with our growth and transition to Institute status. Existing funding from the RFF is sufficient to support one administrative assistant position for the first two years. We will continue to seek opportunities to use external funds and philanthropic sources for these positions, but we seek base budget funding to ensure continuity of funding to fulfill the following three roles:

- **Program Coordinator:** responsibility for day-to-day operations of the Institute; provide budget and financial oversight; support Director in decisions regarding strategy and implementation; preparation of reports; assist with identification of funding opportunities and preparation of grant applications; and other tasks as assigned by the Director and Governing Board.
- **Communications and Outreach Coordinator:** tracking of research impact; develop strategies for proactive engagement with stakeholders; knowledge mobilization activities related to grants; general public events and outreach; poster design and advertising events; organization for academic workshops and conferences; posting videos and other content; website, social media, and other forms of communication.
- **Administrative Assistant:** logistics and travel arrangements for Visiting Scholars, participants in Institute events; event planning and scheduling; record-keeping; general secretarial duties; office support for Director, Associate Directors, and core faculty.

The Institute currently has two staff members (down from three) filling these roles, with one person handling the second and third portfolios due to decreased demand during the pandemic. We expect to need three full-time positions within the next five years, due to the anticipated growth of the Institute and return to an active event series and Visiting Scholar program as the pandemic comes to an end. Depending on further growth, we anticipate further staff needs associated with project management and support for large grants – a “grants wrangler” who could assist in preparing large-scale grants as well as managing the activities and reporting duties. Some of these needs could be addressed through support from existing staff positions at Research Western, or creating staff positions serving all of the university-level Institutes. Funding for these positions will allow research grant expenditures and philanthropic investments to go directly to research and training expenses, while signaling the University’s support to potential donors.

Physical Requirements

8.1 CURRENT SPACE

Prior to moving into the Western Interdisciplinary Research Institute (WIRB) at the end of 2017, the Institute had office space for seven faculty members, six postdoctoral fellows and 13 graduate students. Our new space in WIRB includes 33 desks in an open, collaborative workspace, 18 individual offices, a conference room, and a smaller meeting room. Since moving into this space we've increased our number of resident members and have seen an increase in the number of members coming to us from departments outside of philosophy. Since 2017, all fifteen of the new affiliate faculty members who have joined the Institute have arrived from departments other than philosophy, or with cross-appointments to other departments.

Restrictions due to COVID-19 changed our use of the space in 2020, but prior to that our members had taken full advantage of the new space allocated to us. By 2019 our resident graduate students, whose numbers had increased to 31, were occupying nearly all the desks in our open workspace. A few of the remaining desks were utilized by undergraduate research assistants working with core faculty members. Nine offices were given to our core faculty members, three to postdoctoral fellows (two per office), and two to staff members. Remaining offices were used by visiting fellows or were set aside as spaces for affiliate faculty to use as a swing space outside of their home department.

8.2 FUTURE SPACE NEEDS

Given the rate at which the Rotman Institute is attracting new graduate students and faculty members, as well as the continued success and expansion of our postdoctoral fellow and visiting fellow programs, we expect to outgrow our current space within the next five years. In particular, we expect to fill our current office allocation for faculty (including shared office space, and space for visiting fellows) by 2023.

Table 3: Summary of goals, outcomes, and mechanisms

GOALS	OBJECTIVES	OUTCOMES	MECHANISMS
1. To become a premier destination for researchers working on interdisciplinary projects at the intersection of philosophy and the sciences	1.1 Increase capacity to create interdisciplinary collaborations with global research teams	Annually host a number of short-term visiting external fellows in various areas, and 2-4 long-term visitors (for visits from one semester to a year)	Funding for visiting fellows, office space
		Develop partnerships with research institutes/ centres with complementary strengths.	Faculty/ trainee exchange programs; co-sponsorship of events; joint grant applications
	1.2 Recruit top junior scholars to join the Institute	Maintain an active research community of 6-10 postdocs	Individual research grants, Banting, SSHRC / NSERC postdoc programs
	1.3 Maintain a global Rotman research community	Establish alumni network of Rotman visitors, postdocs, and graduate students	Regular communications about ongoing projects and opportunities; alumni conferences; events at professional meetings
	1.4 Increase diversity of Institute membership and maintain a positive workplace climate	Representation at or above disciplinary norms	Implement training/ oversight to maintain positive climate; emphasize EDID goals in recruitment and planning
2. To create a research environment that fosters innovative solutions to deep and wicked problems.	2.1 Increase capacity to identify pressing problems and recruit members for interdisciplinary research groups	Host annual workshops and conferences to explore new topics	SSHRC Connection grants; support for smaller local workshops
		Develop local networks to explore new problems, establish collaborations	Reading groups, events in shared research space, communications; seed funds for early phase of research. Outreach within the Western community to become the hub (via website and events) for connecting researchers in different departments and faculties.
		Provide incentives for Western faculty to create new projects, join collaborative teams	Institute seed grants, other Western internal grants; dynamic membership policy
	2.2 Enhance development of long-term interdisciplinary research teams	Select 2 new projects per year for initial support, in light of the longer timeframe needed for the development of interdisciplinary projects	Institute seed grants
Support applications for two large team-based grants within five years		New Frontiers in Research (Tri-council); SSHRC Partnership / NSERC Alliance	

GOALS	OBJECTIVES	OUTCOMES	MECHANISMS
3. To provide distinctive interdisciplinary training for students in the sciences and humanities.	3.1 Build capacity of trainees to pursue problems across disciplines	Distinctive graduate training programs (in 3 areas?)	Co-taught seminars across fields; Lab Associates program
		Advocate for, and support the development of, 2-year MA programs with substantial interdisciplinary training component	
	3.2 Participation in collaborative research teams	Integrate postdocs into research groups with faculty from different disciplines	Co-supervision of postdocs by Institute faculty from different disciplines
		Graduate students from different fields integrated into research projects	Institute funding for graduate student research
4. To integrate ethical considerations into scientific research, the development of technologies, and related policy.	4.1 Increase capacity for Institute faculty to impact public policy	Co-sponsor policy-oriented workshops	NSERC Alliance grants, MITACs
		Training for faculty members pursuing policy work	
	4.2 Establish partnerships with private and public institutions with ongoing need for expert advice on best practices	Support teams of philosophers and (social) scientists to develop recommendations / best practices on specific issues	NSERC Alliance grants
5. To anticipate and respond to societal consequences of scientific and technological changes, and to lead public discourse on these issues.	5.1 Prospectively identify new deep and wicked problems	Visits from leading scholars from diverse fields; active speaker series including public-facing events	Speaker series, annual conferences
	5.2 Host regular public-facing events	Attendance targets for public events in London	Staff support to organize speaker series, London public library talks
		Pursue other audiences (revisit collaborations with Ideas)	Staff support for outreach efforts; training
	5.3 Lead public discourse on relevant topics	Regular contributions from Institute faculty in a variety of venues (The Conversation, op-eds, The Agenda, etc.)	Communications training for faculty and trainees, incentives to recognize the value of public-oriented work

Appendices

APPENDIX A: MEMBERSHIP POLICY

Faculty Membership

Faculty members from Western are appointed as members of the Institute for a three-year term, with the approval of the Executive Committee, as either core or associate members. This status can be reviewed, at the member's request, before the end of the three-year term. Members of the Institute with a faculty appointment at Western will continue to report to the appropriate Dean and Chair with respect to their academic responsibilities. The Institute's existing membership policy includes more detailed specifications of obligations and responsibilities for members of different types; this will be revised in consultation with Research Western, based in part on the practices adopted in other Research Institutes at Western, with major anticipated changes highlighted below.

Prospective members may nominate themselves or be nominated by existing members. Nominations will be voted upon by the Executive Committee, on the basis of scholarly excellence, or comparable achievements in relevant areas, and evidence of commitment to the Rotman Institute's vision and mission.

The Institute's 50 current members, from 15 departments and eight faculties at Western, are listed in Appendix B below, with further details regarding their affiliations and research interests. We anticipate continued growth in the faculty membership in the next 5 years. Since 2017 we have added 15 new associate members, all from outside philosophy, and we expect continued growth to meet or exceed this rate. We plan to increase the number of core members to 15-20, in part to more accurately reflect the level of involvement of several associate faculty members. (The Institute space has 14 offices, but several new members from other faculties prefer to share office space rather than have a second office.) We will maintain a dynamic faculty complement: the membership policy is designed to encourage

members to move fluidly between the core and associate categories, reflecting their level of participation in Institute projects.

Core Membership

Core members lead or actively participate in one or more Institute research projects and contribute directly to fulfilling the vision and mission of the Institute. Each core member negotiates a Letter of Understanding with their home department and the Director, in consultation with the Executive Committee. Decisions about initial appointments and renewal will be made by the Executive Committee, with renewal assessment based on obligations specified in the Letter of Understanding. The main obligation of core members will be to pursue interdisciplinary research projects that advance the Institute's vision and mission, and actively contribute to the intellectual life of the Institute in a variety of ways. Core members will be given office space (as available), staff support, and access to competitively awarded Institute funds to support these projects. A more complete list of obligations and benefits is included in the Institute's membership policy, which will hold unless explicitly modified in the Letter of Understanding.

Associate Membership

Associate members include individuals who have contributed to the Institute's activities in a variety of ways, ranging from regularly attending Institute sponsored events to collaborating on Institute projects. The Executive Committee may grant associate members various forms of support, such as temporary office space in the Institute space or staff support, in order to facilitate their contributions. Associate members will not generally be eligible to apply for internal research funding, although the Executive Committee can at its discretion open funding calls to core and associate members. Appointments as associate members are made by the Executive Committee based on scholarly excellence, or comparable achievement in relevant areas, and evidence of commitment to the Rotman Institute's vision and mission.

External Associate Membership

The Institute currently includes several associate members at other universities or institutes who have contributed to the Institute in a variety of ways,

typically through collaboration on research projects and co-supervising trainees. (These individuals were granted membership to overcome practical obstacles to research and training aims, but few former visiting fellows or collaborators have become members.) We propose creating a new membership category for external members, primarily to support ongoing research collaborations. Scholars from other institutions, and individuals from outside the academy, who contribute to Institute projects will be invited to become external associate members. These members may be granted temporary office space in the Institute, and other forms of support, at the discretion of the Executive Committee, in order to facilitate their contributions. They will not generally be eligible to apply for internal research funding. New members can be nominated by existing members, or they can contact the Director directly, with appointments made by the Executive Committee based on scholarly excellence, or comparable achievement in relevant areas, and evidence of commitment to the Rotman Institute's vision and mission.

Trainee Membership

The Rotman Institute will train the next generation of scholars to engage deep and wicked problems from an interdisciplinary perspective, informed by rigorous philosophical thought. Postdoctoral fellows and graduate students are involved centrally in the work of the Rotman Institute and contribute to its vitality in a variety of ways. Postdoctoral fellows will be given office space and staff support, and will be (co-)supervised by a core faculty member. They will take an active role in Institute research projects, and also contribute to the intellectual life of the Institute in various ways, such as organizing reading groups, participating in workshops and events, and helping to prepare grant applications. There are two categories of graduate student membership: resident members, who will be given office space in the Institute, and non-resident members. Resident members apply to join the Institute for a one-year term and will be evaluated based on fit with the Rotman Institute and scholarly profile.

APPENDIX B: CURRENT FACULTY MEMBERS

Table 4: Current Core Faculty Members

Core Faculty Members	Title & Affiliation	Research Areas
Michael Anderson	Rotman Canada Research Chair in Philosophy of Science; Professor, Department of Philosophy	Philosophy of Neuroscience Theoretical and Computational Neuroscience Embodied Cognition
Rob Corless	Emeritus Distinguished University Professor; Department of Applied Mathematics, Philosophy, and Computer Science	Scientific Computing Symbolic Computing Reliability of Numerical Methods for Dynamical Systems
Eric Desjardins	Associate Director, Associate Professor; Department of Philosophy	Philosophy of Biology Philosophy of Science Environmental Philosophy
Anthony Skelton	Associate Professor; Department of Philosophy	History of Ethics Normative Ethics Practical Ethics
Chris Smeenk	Director, Professor; Department of Philosophy	Philosophy of Science History of Science Philosophy of Physics
Jacqueline Sullivan	Associate Professor; Department of Philosophy	Philosophy of Neuroscience Philosophy of Mind Philosophy of Science
Francesca Vidotto	Assistant Professor; Department of Applied Mathematics, and Department of Philosophy	Quantum Gravity Cosmology Foundations of Physics
Chris Viger	Associate Professor; Department of Philosophy	Philosophy of Mind Philosophy of Psychology Philosophical Issues in Cognitive Science
Charles Weijer	Professor; Department of Philosophy, Department of Medicine, Department of Epidemiology and Biostatistics	Bioethics Research Ethics

Table 5: Current Associate Faculty Members

Associate Faculty Members	Title & Affiliation	Research Areas
Pauline Barmby	Professor; Department of Physics & Astronomy	Galaxies
Bipasha Baruah	Professor; Canada Research Chair in Global Women's Issues; Department of Women's Studies and Feminist Research	Gender and Development Women and Work Social, Political and Economic Inequality
Jacquelyn Burkell	Associate Professor; Faculty of Information and Media Studies	The role of cognition in interactions between people and technology
Mark Daley	Professor; Department of Computer Science, Special Advisor to the President on Data Strategy	Natural Computing Convergence Science & Research Computational Neuroscience & Neuroinformatics
Sarah Gallagher	Professor; Department of Physics and Astronomy	Galaxies & Black Holes Science Policy & Open Science Evidence-based Decision-making
Melvyn Goodale	Distinguished University Professor; Canada Research Chair in Visual Neuroscience; Founding Director - Brain and Mind Institute	Visual Neuroscience Action and Perception
William Harper	Professor Emeritus; Department of Philosophy	Evidence in Science Game Theory Kant's empirical realism
Benjamin Hill	Associate Professor; Department of Philosophy	History of Early Modern Philosophy Epistemology
Ingrid Johnsrude	Professor, Joint Appointment with Psychology and School of Communication Sciences and Disorders; Director - Brain and Mind Institute	Cognitive Neuroscience Speech and hearing Neuropsychology
Stefan Köhler	Professor; Department of Psychology, Brain and Mind Institute	Human Memory Cognitive Neuroscience Human Brain Mapping
Marc-André Lachance	Professor Emeritus; Department of Biology	Evolution, biodiversity and systematics of ascomycetous yeasts
Sheila M. Macfie	Associate Professor; Department of Biology	Mechanisms of metal-tolerance in plants
Carolyn McLeod	Professor and Chair; Department of Philosophy	Ethics Applied Ethics (esp. bioethics) Feminist Philosophy
Gerry McKeon	Professor Emeritus; Department of Applied Mathematics	Quantum Field Theory Gravity Elementary Particle Physics
Angela Mendelovici	Assistant Professor; Department of Philosophy	Philosophy of Mind Intentionality Consciousness & Representation
Nouri Najjar	Assistant Professor; Ivey School of Business	Air Pollution Regulation Climate Change Policy Environmental Economics
John Nicholas	Professor Emeritus; Department of Philosophy	Philosophy of Science Pragmatist Epistemology Philosophy of Perception
Elyseé Nouvat	Assistant Professor; School of Health Studies	Global health & Humanitarian healthcare Research ethics Palliative care across cultures

Associate Faculty Members	Title & Affiliation	Research Areas
Adrian Owen	Professor of Cognitive Neuroscience & Imaging, The Brain and Mind Institute	Cognitive and Behavioural Neuroscience Clinical and Veterinary Neuroscience
Joanna Redden	Assistant Professor, Faculty of Information and Media Studies, Western University	Datafication Governance & Social Justice Artificial Intelligence
Jacob Shelley	Assistant Professor; Faculty of Law, School of Health Studies & Schulich Interfaculty Program in Public Health	Health Law & Policy Health Ethics Public Health & Chronic Disease Prevention
Bhagirath Singh	Director, Centre for Human Immunology; Professor, Department of Microbiology and Immunology, Robarts Research Institute	Type 1 Diabetes Regulation of Autoimmunity Immunology of peptide antigens
Maxwell Smith	Assistant Professor; School of Health Studies, Faculty of Health Sciences	Bioethics & Social Justice Public Health & Health Policy Moral and Political Philosophy
Luke Stark	Assistant Professor, Faculty of Information and Media Studies, Western University	Applied Ethics Machine Learning Artificial Intelligence
John Thorp	Associate Professor; Department of Philosophy	Ancient Philosophy Free Will Philosophy of Religion
Tony Weis	Associate Professor; Department of Geography	Agriculture and Food Systems Political Ecology

Table 6: Current External Associate Faculty Members

External Associate Faculty Members	Title & Affiliation	Research Areas
Robert W. Batterman	Professor; Department of Philosophy (University of Pittsburgh)	Philosophy of Science History of Science Philosophy of Physics
Tim Bayne	Professor; Department of Philosophy (Monash University)	Philosophy of Mind Cognitive Science Consciousness
Isra Black	Lecturer, York Law School, University of York	Healthcare Law Normative jurisprudence Moral philosophy
Samantha Brennan	Professor, Department of Philosophy; Dean, College of Arts (University of Guelph)	Moral and Political Philosophy Normative and Applied Ethics Feminist Philosophy
Lisa Forsberg	British Academy Postdoctoral Fellow, Faculty of Law, University of Oxford	Philosophy of medical law Normative and practical ethics Philosophy of criminal law
Doreen Fraser	Associate Professor; Department of Philosophy (University of Waterloo)	Philosophy of physics, philosophy of science, applicability of mathematics, analogies, history of physics (especially 17th, 19th and 20th Centuries)
Charles M. Heilig	Lead Methodologist - Tuberculosis Trials Consortium (Centres for Disease Control & Prevention)	Clinical Trial Methodology Research Ethics Mathematical Statistics

External Associate Faculty Members	Title & Affiliation	Research Areas
Elisa Hurley	Executive Director, Public Responsibility in Medicine and Research (PRIM&R)	Moral Philosophy Bioethics Research ethics
Henrik Lagerlund	Professor; Department of Philosophy (Stockholm University)	Medieval Philosophy Ancient and Early Modern Philosophy Metaphysics, Mind, Language
Andrew McRae	Research Director - Division of Emergency Medicine Division of Emergency Medicine (University of Calgary)	Emergency Medicine Clinical Epidemiology Bioethics
Markus Müller	Institute for Quantum Optics and Quantum Information, Vienna (Perimeter Institute for Theoretical Physics)	Foundations of Quantum Mechanics Quantum Information Theory Physics of Information
Mark Perry	Professor; School of Law (University of New England)	Open Innovation Intellectual Property Rights Biotechnology Law
Stathis Psillos	Professor; Department of Philosophy and History of Science (National and Kapodistrian University of Athens)	Philosophy of Science Metaphysics History of Philosophy
Carlo Rovelli	Professeur de classe exceptionnelle, Department of Physics, Aix-Marseille University; Adjunct Professor, Department of Philosophy, Western University	Loop quantum gravity Relational quantum mechanics History and philosophy of science
Lee Smolin	Founding and Senior Faculty Member (Perimeter Institute for Theoretical Physics)	Cosmology Foundations of Quantum Mechanics Elementary Particle Theory

APPENDIX C: ITEMIZED RECOMMENDATIONS FROM 2019 REVIEW

1. Receive further staff support, funded centrally.
2. Apply to become a university-level institute.
3. Reach mutual understanding with the Department of Philosophy on several issues (enumerated in the report) related to graduate training, service, and co-sponsorship of events.
4. Expand the IAC to include more members, more closely aligned with Institute strengths, and clarify the ongoing role of the IAC.
5. Distribute internal administrative work, currently borne by the Director, to the Associate Director and core members.
6. Diversify sources of funding, with the following aims: (i) raising funds to support graduate students; (ii) supporting staff positions; (iii) collaborating in multi-year, multi-institution grants; (iv) using “seed grants” to develop innovative new ideas; (v) developing community and industrial partnerships.
7. Develop two-year interdisciplinary MA programs, and add an additional year of support for interdisciplinary PhD programs.
8. Provide training to enhance outreach and knowledge translation.
9. Increase diversity of the core faculty, including hiring a new CRC if possible.
10. Provide training regarding climate issues, and designate a contact person to handle complaints.

APPENDIX D: BUDGET

The budget estimates are based on moderate growth through the five year period, with annual expenditures to support Institute research increasing from \$506,000 up to \$543,000. During the first two years, existing funds and philanthropic support from the RFF fund cover nearly 80% of projected expenses, with a total request to Western Research and the faculties for \$215,000 over two years (primarily for staff supports and operating expenses). The estimated contribution from Western Research and the faculties increases for the last three years of the planning period, to an average of \$224,000 per year total (averaging \$63,000 from faculties, and \$161,000 from Western Research per year). Internal Western funding will be used primarily to cover staff resources and operating expenses. We will seek to supplement internal funding as far as possible through external grants and recouping indirect costs. The budget reflects a distinction between core expenses to be supported by Western and other priorities that will be the target of our fundraising efforts. We have projected external support continuing at a slightly more modest level as funding from the current RFF donation to illustrate how much we will need to raise to continue on our current trajectory. Here we will describe this proposed budget, contingency plans, and projected expenses in more detail.

Funding Sources:

The budget includes the following five funding sources:

1. **RFF & Existing funding:** This includes three separate components.
 - a. A donation from the RFF governed by the 2008 agreement, with the budget specified in Schedule E. We have simplified the budget categories for presentation here, but can provide details about how Schedule E maps onto this budget on request. We have not included funds provided by the RFF for a faculty position in the department of philosophy, totaling \$292,653 (over two years), as this is not part of the Institute's discretionary budget. The faculty of Arts and Humanities will fully fund this faculty position after the end of the agreement. There is substantial carry-forward from RFF funds devoted to visiting speakers, fellows, and conferences (particularly over the

last year). These funds will be used for the first two years to maintain a higher level of postdoc hiring and for seed grants awarded to members; if pandemic-related travel disruptions continue, we will shift more of the funds for speakers / visitors / conferences to support these priorities.

- b. Smeenk's JTF grant (ending summer 2021) has funded one administrative position and some operating expenses (such as computers for staff) for the last two years and will partially fund the position for 2021-22.
 - c. Endowment income: the RFF contributed a \$1 million endowment prior to the 2008 agreement establishing the Institute. This endowment is attached to the Rotman CRC. The income from this endowment, estimated at \$49,000 per annum, is used to fund (partially) a postdoctoral fellowship.
2. **Western funding:** we have broken internal funding down into two categories, indicating commitments from the Deans under the heading Western faculties (in aggregate, without breaking down contributions from individual faculties), and the proposed contribution from Western Research.
 3. **External funding:** our fundraising target. For the sake of definiteness, the budget specifies the funds needed for modest Institute growth over the five-year period.

Table 7 highlights the contrast between the sources of secure funding, and the aspirational external funding. The highlighted cells are expenditures we aim to cover through fundraising, which would allow us to continue to pursue research initiatives and knowledge mobilization at the same scale.

APPENDIX D: BUDGET (continued)

Fundraising Priorities and Contingency Plans

We will continue to work in partnership with University Advancement in pursuing further funding from the RFF, while also seeking to identify other potential donors. The generous donation from the RFF has been used to support the Rotman research community as a whole, helping faculty to develop innovative new projects and to recruit talented trainees and collaborators. If we are unable to secure this funding going forward, we will shift more fully to a model of grant-funded research support, with research groups supported by grants awarded to individuals or teams. The funding requested from Western will be sufficient to maintain the core operations of the Institute, with the rest of our research and knowledge mobilization activities supported through grants.

We aim to diversify our funding sources by supporting large scale collaborative grant proposals, with colleagues at Western or at other partner institutions. As noted above, we will work closely with the team at Western Research to identify the best funding opportunities, and use the Institute's existing resources to support teams of faculty developing these proposals. In addition to large grants, we also expect to see more self-funded visitors who choose the Rotman Institute as a research destination -- we have already hosted several sabbaticants and Tri-Council postdocs, for example.

Finally, working with University Advancement we have tentatively identified a number of areas of growth with potential to attract philanthropic support: investment in early career faculty (including support for recruitment/retention and catalyst funding to support new research projects); support to remain globally competitive in attracting the best trainees (graduate students and postdocs); and investment in knowledge mobilization activities.

Expenses:

1. Personnel
 - a. Two staff positions: both UWOSA positions, pay scales based on current staff.
2. Research Initiatives
 - a. Postdoctoral Fellows: up to four postdoctoral fellows, with annual salary set at the SSHRC rate (currently \$45,000 per annum plus benefits).
 - b. Expenditures for Visiting Fellows based on pre-pandemic year (2019), will be reallocated to postdocs / seed grants while pandemic related restrictions continue.
 - c. External partnership: support for developing large collaborative grants with partner institutions. Seed grants: used to support early stages of research, typically summer support for graduate students (7 awards for summer 2020; 10 awards for summer 2021; awards range from \$2,500 to \$5,000).
3. Knowledge Mobilization
 - a. Expenditures for conferences, speaker series, workshops; again based on 2019, unclear when these will return to pre-pandemic levels.
4. Operating Expenses
 - a. Office supplies and IT expenses: technical support to continue to be provided by the Faculty of A&H, expenses only for staff computers and phone lines.
 - b. Support for faculty in administrative roles: total of 1.5 teaching buyouts (nominally 1.0 for Director, .5 for Associate Director).
 - c. Advisory Board meetings: estimate for annual meetings, with resumption of face-to-face meetings, and other Institute- related travel.

Table 7: Projected Expenditures - detail view

(Cells highlighted in lavender correspond to expenditures that will be incurred only if external funding is available.)

Projected Expenditures	2021 - 22	2022 - 23	2023 - 24	2024 - 25	2025 - 26	Total
Personnel	\$131,166	\$135,101	\$139,154	\$143,328	\$147,628	\$696,376
Operations Manager	\$70,683	\$72,803	\$74,988	\$77,237	\$79,554	\$375,265
Administrative Assistant	\$60,483	\$62,297	\$64,166	\$66,091	\$68,074	\$321,111
Research Initiatives	\$289,349	\$285,922	\$282,517	\$290,992	\$299,722	\$1,448,502
Rotman CRC postdoc (endowed) + Western funded postdocs	\$204,349	\$198,372	\$82,432	\$84,905	\$87,452	\$657,509
Externally funded postdocs	\$ -	\$ -	\$109,909	\$113,206	\$116,602	\$339,717
Visiting fellows (Short and long-term)	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275	\$265,457
External Partnerships & Seed grants	\$35,000	\$36,050	\$37,132	\$38,245	\$39,393	\$185,820
Knowledge Mobilization	\$44,056	\$45,378	\$46,739	\$48,142	\$49,586	\$233,901
Events (Annual Speaker Series, Conferences & Workshops)	\$44,056	\$45,378	\$46,739	\$48,142	\$49,586	\$233,901
Operating Expenses	\$41,217	\$42,310	\$43,471	\$44,667	\$45,899	\$217,563
Office supplies, printing, IT support, web server, staff computers, phones & software licenses	\$8,167	\$8,268	\$8,408	\$8,552	\$8,701	\$42,096
Director / Associate Director(s) teaching releases	\$25,050	\$25,802	\$26,576	\$27,373	\$28,194	\$132,994
IAC meetings & other Institute-related travel	\$8,000	\$8,240	\$8,487	\$8,742	\$9,004	\$42,473
	\$505,788	\$508,710	\$511,881	\$527,129	\$542,835	\$2,596,342

APPENDIX E: GOALS AND METRICS

The following outlines more concrete objectives, outcomes, and mechanisms for each of the goals listed in the body of the proposal, and summarized in Table 3. We acknowledge the difficulty of evaluating progress in reaching each of these goals, but will work closely with Research Western in refining this roadmap for the next five years and identifying appropriate metrics.

Research

To foster success for Rotman Institute researchers at all levels.

- a. *Increase capacity to create interdisciplinary collaborations with global research teams:* we will continue to bring the world to Western through a consistent, and consistently sought-after, Visiting Scholars program. We have a successful program for short-term visitors, but reaching our research goals will require longer-term collaborations. We will expand from short to long-term visitors with the goal of hosting four visitors each year for a period of six months to one year each. We will continue to use the short-term visitors program to develop new collaborations, with the aim of bringing those collaborators back for longer stays. For established collaborations, the cost of these visits will be covered by grants, but we will offer competitively awarded funding for visitors helping to launch new projects.

We will develop formal and informal partnerships with other research institutes to complement our strengths and extend our reach. We will continue to work with existing partners, as described above. We will also seek to establish new project-based relationships with Canadian and regional partners, as well as international centres such as the Max Planck Society in Germany, the Centre for Philosophy of the Sciences at Australian National University (whose Director is a Rotman alumna), and The Center for Philosophy of Science at the University of Pittsburgh (USA). These partnerships will build on our existing collaborations described above. Collaborations will include faculty and trainee exchange programs, co-sponsorship of events, joint grant applications, joint scholarly outputs, and other joint research activities.

- b. *Recruit top junior scholars:* the Rotman Institute has maintained an active postdoctoral program since its inception, with as many as 9 postdoctoral fellows at one time and an average of 4 per year. A sustained group of postdocs of this size is extremely rare in humanities-based Institutes. We have recruited excellent junior scholars to these positions, because of our reputation as a productive research environment for early career scholars and outstanding placement record. Funding postdocs has proven to be an extremely effective way to build research capacity, develop collaborative ties through co-supervision across distinct fields, and build the Institute's reputation. Achieving sustainability of this program is thus a high priority. As we grow, our aim is to expand our postdoctoral program to support 6-10 scholars per year, for two-three year terms. We will seek dedicated funding to support this program, while continuing to pursue competitive fellowships such as the SSHRC / NSERC postdoc programs, the Banting fellowship and other international grant schemes.
- c. *Maintain a global Rotman research community:* The Institute already has an extensive annual program of events that will be opened to the broader community outside of Western, including the public and other key stakeholders such as policymakers, in a more proactive way to further cement Institute's national and international standing. Activities involving visitors, postdocs, and graduate students will continue to build a research community that stretches beyond the time spent at the Institute. Our connection to our extended community will be strengthened further through regular communications about ongoing projects and opportunities, alumni conferences, events at professional meetings, and other activities that aim to constitute an alumni network.
- d. *Increase diversity of Institute membership and maintain a positive workplace climate:* The Institute's success depends on supporting a diverse research community. Our commitment to EDID goals has been reflected in our choices for speakers, postdocs, visiting fellows, and participants in Rotman conferences, which consistently include representation by women and other under-represented groups at or above the disciplinary

norms for philosophy. We must do better, however, with regard to the diversity of our core and associate faculty. We will seek to increase the diversity of Institute membership, and continue to maintain a positive workplace climate, as we grow over the next five years. We will do so by formulating clear EDID goals for recruitment and long-term planning, and implementing appropriate training and oversight (such as creating a standing climate committee).

To create a research environment that fosters innovative solutions to deep and wicked problems.

- a. *Increase capacity to identify challenges and recruit members for interdisciplinary research groups:* We will build on several existing methods for identifying challenges. We have run a successful annual conference series that has brought together scholars from diverse disciplinary backgrounds, to discuss topics such as “Rethinking the Taxonomy of Psychology,” “Knowledge and Models in Climate Science,” and the so-called “replicability crisis.” These conferences have been truly interdisciplinary, including philosophers and, typically, a majority of participants from other disciplines. As our membership expands, we will prioritize focusing on deep and wicked problems that arise in scientific practice in diverse research domains. We will supplement these conferences with smaller workshops and a variety of types of outreach within the Western community: reading groups, events in the shared research space, and communication regarding Institute events and funding opportunities. These efforts will be accompanied with incentives to encourage Western faculty members to participate in developing new projects and join research teams. The membership policy is designed to facilitate joining the Institute as a core member in order to participate fully in a research project, taking advantage of the shared physical space in the WIRB.
- b. *Enhance development of long-term interdisciplinary research teams:* Interdisciplinary grants require a longer timeframe for development, as a research group refines their formulation of the research problem and the contributions to be expected from different domains. The Institute also needs to counter strong incentives to continue working within a discipline, rather than pursuing riskier

interdisciplinary projects. In light of these obstacles, the Institute will offer competitively awarded internal seed grants to support the early stages of work on a new project, providing support for trainees to work on projects, visits from research collaborators, and small focused workshops. The Institute aims to support further development of at least two novel larger-scale collaborations within the next five years, through staff support, hiring of postdoctoral fellows, visiting fellows, and hosting of focused workshops and conferences.

Training

To provide distinctive interdisciplinary training for students in the sciences and humanities.

- a. *Build capacity of trainees to pursue problems across disciplines:* In 2012, the Institute started the Lab Associates program in collaboration with colleagues in BMI. Faculty and postdocs provided philosophy graduate students with training in neuroscience to prepare them to join a research group in the BMI. They then joined a particular research group for a year or more, and the direct experience shaped their philosophical project and approach to academic research. This distinctive opportunity has helped to attract excellent graduate students in this area. Institute faculty now regularly teach interdisciplinary graduate seminars with colleagues in BMI, and host reading groups with a mix of faculty, postdocs, and graduate students from different fields. The co-location of the BMI and the Rotman Institute in the WIRB has been particularly fruitful for these training programs, and will continue to yield collaborative projects. We will build on this model of value-added training opportunities for other areas of Institute research, such as foundations of physics. We will regularly offer interdisciplinary seminars to prepare students and postdocs to participate in active research projects. We will also continue to develop similar opportunities for science students. We have offered reading groups targeting science students, for example focusing on the foundations of statistics and methodology in the life sciences, organized in conjunction with the replicability crisis conference. Going forward we will provide focused philosophical training to support participation of science students in Institute projects, and to enhance their own

research. Finally, the Institute has added value by developing new curriculum for MA level courses, such as a course in ethical and societal implications of AI currently co-taught by an Institute postdoc. We will continue to do so in appropriate areas. We will further advocate for the development of 2-year MA programs for interdisciplinary training in relevant fields, although these will be housed within the appropriate departments rather than the Institute itself.

- b. *Integrate trainees into collaborative research teams:* The Institute's vision for graduate and postdoc training prioritizes active participation, as early as is feasible, in problem-based interdisciplinary research. In addition, we will provide training on knowledge mobilization and opportunities to work with, network with, and tailor research communications to external stakeholders. Joining research groups has been particularly valuable for graduate students, who benefit from interactions with peers and postdocs in the group in addition to faculty supervision. We will fund graduate students to contribute to Institute research projects through the summer, through grants held by members along with internal seed grants awarded for new projects. The postdocs both contribute enormous energy to these projects, while also benefiting in terms of developing leadership skills and extending their areas of research expertise. Several Institute postdocs have been co-supervised by faculty from different disciplines, effectively mediating and strengthening a collaboration. As described above, the success of the postdoctoral program, as reflected in our recruitment of top junior scholars and our placement record, illustrates the value added by the Institute's research environment.

Societal Impact

To integrate philosophical and ethical considerations into scientific research, the development of technologies, and public policy.

- a. *Increase capacity for Institute faculty to impact public policy:* Effective capacity-building requires both training and networking. The federal policy training component (for students, postdocs, and faculty) will be developed in partnership with organizations such as the Canada School of Public Service and the Institute on Governance. Within Western, the

Ivey School of Business and the Western Law School are natural partners, and the role of Western as a key local institution can be leveraged to connect with the City of London. Training partnerships can be enhanced by joint activities such as conferences and built out into collaborative networks for sharing expertise and determining the routes for effective knowledge mobilization from research to policy.

- b. *Characterize deep and wicked problems more fully to assemble necessary and diverse expertise:* The deficiencies in anticipating and mitigating negative outcomes from policy choices such as public health measures or reliance on artificial intelligence algorithms are often obvious in retrospect, and could have been avoided if the appropriate expertise and stakeholder consultation occurred early enough. With the Institute focus on the ethics of science and technology, members are well-positioned to take on the role of determining who should be at the table and engaged in developing equitable solutions to wicked problems. To achieve this, we will co-sponsor public-policy oriented workshops with concrete deliverables such as whitepapers and briefing notes. Such activities will be delivered in partnership with local and national organizations such as the Institute for Research on Public Policy, the Canadian Medical Association, and the Canadian Science Policy Conference to explore and flesh out the relevant issues and interests in wicked problems.
- c. *Raise the profile of Institute faculty with expertise relevant to deep and wicked problems:* Institute faculty should be recognized and sought-after as members of expert panels constituted to advise government at all levels. The Institute website and social media will highlight Institute faculty who can contribute to discussions on wicked problems and make their work accessible to those outside of academia, including policymakers. Support for Institute faculty to participate in public policy forums (such as the Canadian Public Policy Conference) and communications training in writing opinion pieces and speaking to the media (such as delivered by Informed Opinions) will further raise the profile of Western faculty in the public-policy sphere. Tracking of scholarly and professional activities to support performance metrics and evaluation will leverage Western Research's scholarly impact support.

To inform and engage the public on deep and wicked problems.

a. *Lead public discourse on relevant topics:* The Institute's research is communicated to the public in a number of ways, many of which provide the opportunity for productive mutual exchange. Institute faculty are regular contributors in a variety of public venues, such as The Conversation, op-eds, The Agenda, etc. Visitors and members of the Institute are engaged in conferences and lecture series addressed to the public. The Institute's ongoing public lecture series, in collaboration with the London Public Library, has been particularly well attended and fruitful. The institute also aims to renew its past collaboration with CBC's Ideas.

The Institute aims to further increase attendance at established events, and generally extend the audience for Institute events. In part this will happen naturally as we expand and diversify Institute membership and research topics and increase our presence in public policy discussions. We will also begin to offer Institute members (especially early-career faculty, post-docs and graduate students) training in public communication. We have recently developed and will seek to expand a program of incentives for public outreach and research dissemination in venues such as podcasts, blog posts, and relevant social media communication.



APPENDIX F: GOVERNANCE

Director

Selection: The Director will be chosen through a selection committee, chaired and selected by the VPR, that includes broad representation from the Institute's membership, and the Deans (or designates) of the faculties most heavily invested in the Institute. The Director will be appointed to a renewable five-year term. The selection process will usually coincide with a review of the Institute's progress in fulfilling its vision and mission, at five-year intervals as described in MAPP 7.9.

Responsibility: The achievement of the Institute's Vision and Mission will constitute the Director's primary responsibility, all within the greater context of their university appointment.

Report: The Director will report to the VPR, who has responsibility for oversight of the strategic plan and the Institute's budget.

Associate Directors

Selection: Associate Directors will be Institute faculty members at Western, chosen by the Director of the Institute in consultation with the Executive Committee. (There is currently one Associate Director, but we may add further positions as the Institute continues to grow.) Associate Directors will be appointed to three-year, renewable terms.

Responsibility: The Associate Directors will take leadership of a particular portfolio. Currently the Associate Director is responsible for aspects of knowledge mobilization and training: planning and organizing the Institute annual speaker series, issuing invitations to guest lecturers, overseeing postdoctoral fellows, and reviewing applications for graduate student members. This portfolio for each Associate Director will be chosen in consultation with the Director and Executive Committee, leading to a letter of understanding specifying their duties and expectations.

Report: The Associate Directors will report to the Director and to the Executive Committee.

Governing Board

Membership: The Governing Board will consist of the Vice-President Research (or designate), Director of the Institute (*ex officio*), administrative staff (*ex officio*, non-voting), the Dean of Arts and Humanities (or designate), and the Deans (or designates) of the two or three most invested faculties (as reflected in, for example, representation among Institute faculty).

Responsibility: The mandate of the Governing Board will include sign-off authority on Institute programs, annual approval of the budget, and review of vision and strategy and metrics for evaluating success.

Meeting Arrangements: The committee will be chaired by the VPR, with meetings at least once annually. The Board is expected to meet three times per year, with more frequent meetings to be scheduled as necessary. Minutes from the meetings will be submitted to the VPR's office.

Executive Committee

Membership: The Executive Committee, chaired by the Director, will also include administrative staff (non-voting), and Associate Director(s). Two or three faculty members of the Institute will be elected to serve for three-year renewable terms. (The number of elected members will be adjusted to ensure an odd number of voting members.) The Governing Board will review the composition of the Executive Committee after two years.

Responsibility: The mandate of the Executive Committee will be to provide oversight on the day-to-day operations of the Institute, including, but not limited to: management of administrative personnel (including hiring); allocation of funds and budget oversight; the planning and hosting of conferences, workshops, speakers series at the Institute; and the administration of other Institute initiatives and activities (such as training programs). The Executive Committee will have voting authority on faculty membership (appointments and renewals).

Meeting Arrangements: The Executive Committee will meet on a regularly scheduled basis at least once each month during the academic year, and at such other times as may be requested by the Director. The Executive Committee reports to the VPR. Minutes of the meetings will be provided to the Governing Board.

Research Advisory Committee

Membership: The Research Advisory Committee, chaired by the Director, will consist of the following *ex officio* members: Director of the Institute, administrative staff (non-voting), Associate Director(s), and the Chair of the Department of Philosophy (or designate). The remaining members will be elected from among Institute faculty and trainees: five or six faculty members of the Institute, a postdoctoral fellow representative, and a graduate student representative from the Institute. (The number of elected members will be adjusted to ensure an odd number of voting members.) Faculty members will be elected to three-year renewable terms, and trainees will be elected to one-year terms. These terms will be staggered with one or two members rotating off the committee each year. Of the elected faculty members, at least two will have primary academic appointments in a faculty other than Arts & Humanities. The Governing Board will review the composition of the Research Advisory Committee after two years, to ensure that stakeholders at Western have appropriate representation on the committee.

Responsibility: The mandate of the Research Advisory Committee will be to provide input from the broader research community, leading to recommendations to the Executive Committee. The Research Advisory Committee will provide advice to the Executive Committee and the Director on topics including, but not limited, to: research priorities; the selection of visiting scholars; the recruitment and appointment of postdoctoral fellows to the Institute; the training programs; promoting leadership in informed public debate of policy issues related to science; and promoting public engagement on issues in science. A subset of the Research Advisory Committee (excluding the graduate student representative and the postdoctoral representative) will have voting authority on evaluation of internal grants and research awards.

Meeting Arrangements: The Research Advisory Committee will meet on a regularly scheduled basis monthly or bi-monthly during the academic year, and at such other times as may be necessary. The Committee reports to the Governing Board, and minutes of the meetings will be provided to the Governing Board.

Advisory Board

Membership: The Institute's Advisory Board will be constituted of between five to eight distinguished and respected academic experts of international stature in disciplines relevant to the Institute's Vision and Mission. (The Institute currently has an International Advisory committee, with members listed in Table 8, with a similar mandate. Current members will form the core of the new Advisory Board.) *Ex officio* members of the board from Western will include: the VPR (or delegate), a representative from advancement, the Director of the Institute, and the Deans (or designates) of the three or four most invested faculties (as reflected in, for example, representation among Institute faculty).

The Director, Deans' representatives, and VPR will all at times have the right to invite senior guests to participate in Advisory Board meetings as will benefit the strategic deliberations of the Institute. The President and Vice Chancellor may attend any meeting of the Advisory Board as she/he/they wishes.

Selection: Committee members will be appointed by the President of the University for a term of three years, renewable. Members will be invited based on consensus of the Research Advisory Committee and in consultation with the VPR and Director. At least two current members of the Advisory Board will be consulted at the initial stage of each relevant search constituted at any time in the future for Advisory Board appointments.

Responsibility: The mandate of the Advisory Board will be to provide advice to the Director and the Governing Board on potential new directions and programs of the Institute, and to give input on educational issues as requested by the Director, which may include the periodic review of the Vision and Mission of the Institute. The Advisory Board will maintain minutes of its meetings or records of its advice or input as appropriate, which will be distributed at a minimum to members of the Advisory Board and to the Governing Board. The Chair of the Advisory Board will be an external member selected by the Advisory Board.

Meeting Arrangements: The Advisory Board will meet on a regularly scheduled basis of at least once each calendar year and at such times as may be requested by the Director. The Advisory Board will be afforded the opportunity to meet with faculty members, students, and administrative officers (such as the President and Provost of the University) at reasonable times, and the aforesaid persons will be afforded access to members of the Advisory Board. The Advisory Board reports to the Governing Board, and minutes of the meetings will be provided to the Governing Board.

Out-of-pocket expenses of Advisory Board members reasonably incurred by them in the performance of their duties including travel and accommodation expenses (it being anticipated that the majority of the Advisory Board members will be leading international figures based in foreign locations) will be paid through expendable funds available to the Institute.

Table 8: Current Advisory Board Members

Advisory Board Members	Title & Affiliation	Research Areas
Alan Bernstein	President and CEO of the Canadian Institute for Advanced Research; President Emeritus, Canadian Institutes of Health Research; Executive Director, Global HIV Vaccine Enterprise	Embryonic development Hematopoietic stem cells Cancer
Jane Maienschein	Professor and Director of the Center for Biology and Society, Arizona State University	History and Philosophy of Biology Bioethics and Biopolicy Embryology, Genetics, and Cytology
Julian Savulescu	Professor and Uehiro Chair in Practical Ethics; Director of the Oxford Uehiro Centre for Practical Ethics, Oxford University	Practical Ethics Medical Ethics Human Enhancement
C. Kenneth Waters	Tier I Canada Research Chair in Logic and Philosophy of Science, University of Calgary	Philosophy of Evolutionary Biology Philosophy of Science Scientific Metaphysics

APPENDIX G: EMBEDDING EDID PRINCIPLES IN INSTITUTE PRACTICES

The Institute is committed to implementing proactive measures to address systemic barriers to recruitment and participation in our research community, focusing on the four groups identified in the Employment Equity Act (women, Indigenous Peoples, persons with disabilities and racialized minorities). (However, we acknowledge that this neglects important differences in representation among specific groups that fall under these headings.) Here we will briefly describe our plans to ensure that Institute decision making -- including recruitment of faculty members and graduate students, internal research awards, and hiring of postdocs -- will be informed by EDID principles and exemplify best practices.

Currently the Institute slightly exceeds disciplinary norms for representation among these groups within philosophy, although this is no cause for celebration. Data from the Canadian Philosophical Association shows that philosophy is a remarkably homogeneous discipline. Representation among faculty members in philosophy at Canadian universities is as follows: women -- 30 %; persons with disabilities -- 2 %; and racialized minorities -- 9 %. Indigenous Peoples are absent from the professoriate and women of colour make up only 2 % of faculty. Among faculty members of the Institute, 32 % are women and 9 % racialized minorities. We have been more successful in promoting diversity through our speaker series and events, and our visiting fellows program, where we have far exceeded these norms. We also have higher representation among our trainees: our postdocs (since 2011) are 36% women and 14% racialized minorities, and our grad students (the current cohort) are 32% and 25%, respectively. Until now, however, we have not tracked the representation of Indigenous Peoples, persons with disabilities, or specific groups within "racialized minorities".

As a first step, we will monitor diversity and inclusion at the Institute --- for example, by conducting an anonymous annual survey of all members to understand recruitment, retention, and any obstacles to participating fully in the research life of the Institute. All data collection will be done in consultation with Western Research, who will help design the survey or develop other methods of assessment. We will develop an Institute wide statement of EDID principles within the first six months of the

Institute's existence, focusing on the measures we will take to create an inclusive research community and to address decolonization. We will formulate explicit goals and metrics to evaluate our progress, and gather the data needed for these metrics. Here we describe our current plans, which we will further refine in close consultation with Western Research and the Office of Indigenous Initiatives.

The Executive Committee will either receive training with regard to EDID best practices or strike a further committee to advise on these matters. In either case, the goal is to recognize and counteract structural inequity and implicit/explicit biases, with regard to a variety of Institute decisions. We will further aim to identify barriers to research productivity, such as inequitable distribution of service work or other burdens placed on members of under-represented groups. EDID training and resources will be developed with Western Research (Mariam Hayward, Knowledge Exchange and Impact Manager; and Manager of Equity, Diversity, Inclusion & Decolonization in Research – a new position at Western Research), working with our own dedicated knowledge mobilization staff.

We will pursue the following specific steps to enhance the diversity of our trainees. First, we will counter inequities in the recruitment process itself, by following the best practices outlined in "Creating an Equitable, Diverse and Inclusive Research Environment: ..." by the Canada Research Chairs Program. With training from Western Research staff, the Institute will encourage members to identify bias in any job postings, include appropriate diversity and inclusion statements, and establish clear and consistent criteria for evaluating candidates. The Institute's staff will work with Western's Equity Office and HR to review the language of job postings, and to develop strategies to reach under-represented groups. Second, we will pursue the possibility of targeted funding (such as summer research awards for graduate students) specifically for applicants from under-represented groups, in consultation with Western Research and the Office of Indigenous Initiatives.

We will support Institute members to incorporate and reflect EDID best practices as part of managing their research groups, and in their grant applications. Western Research will help faculty members set achievable short and long term EDID goals, to be included in training and mentorship plans. We will organize mentorship activities for early career faculty and postdocs, designed in particular to address the needs of members from under-represented groups.



APPENDIX H: INTELLECTUAL PROPERTY AND COMMERCIALIZATION

Ownership and/or Commercialization of Intellectual Property

The Institute does not have special arrangements with members (faculty, staff, or students) with respect to intellectual property created through work undertaken at the Institute. Core members of the Institute will acknowledge their affiliation in publications or other research outputs, and the recipients of internal research awards will also acknowledge funding support. Members will follow all guidelines set out by the Senate and the UWOFA Collective Agreement.

Private Sector Contract Research

The Institute does not have special arrangements with respect to private sector contract research. Members of the Institute who engage in contract research will comply with Western University guidelines for overhead charges on research contracts.

Report of the COU Academic Colleague Professor Erika Chamberlain

The COU Academic Colleagues met virtually on May 11-12. The following discussion items are of potential interest to Senators.

Tuition Framework: On April 30, Ontario announced a one-year extension of the tuition freeze for Ontario residents studying at colleges and universities. Tuition for out-of-province students will return to a system similar to the previous framework, with universities having the option to increase tuition by up to 3% in 2021-22. It is estimated that out-of-province students represent about 12% of enrolment across the university sector, but this is not spread evenly across institutions.

This particular proposal had not been requested by universities and presents some technical problems. For instance, unless they apply for OSAP, it is difficult to identify whether they are out-of-province students. In addition, most universities have already prepared budgets without taking this potential increase into account.

NOSM and Hearst: The Ontario government has introduced proposed legislation to establish the Northern Ontario School of Medicine (NOSM) and Université de Hearst (Hearst) as independent, standalone degree-granting institutions. If passed, the legislation would formally recognize the role these institutions play in providing students with access to medical training and French-language studies in Northern Ontario.

COU sent a letter to the Minister expressing the sector's concerns over the lack of consultation with universities regarding the impact of this decision on other institutions and the sector as a whole.

Micro-credentials: On April 23, COU and Colleges Ontario sent a joint letter to Minister Romano asking to work together to ensure the success of the micro-credentials program. This includes the development of robust quality assurance frameworks that respect institutional autonomy and allow the sectors to respond nimbly and flexibly to rapidly-changing economic circumstances and skills requirements. Ontario colleges and universities have already begun the work of adapting their quality assurance processes to integrate micro-credentials.

On April 30, the Ministry of Colleges and Universities (MCU) and Ministry of Labour, Training and Skills Development (MLTSD) released a call for proposals for the Ontario Micro-credentials Challenge Fund. The Fund will provide \$15M to institutions to accelerate the development of rapid training programs. This includes \$11M to support the development of micro-credentials, and four regional Impact Awards of up to \$1M that may be awarded to applicants whose projects are most successful, scalable, and have a significant community impact. Additional consideration will be given to proposals that include work-integrated learning (WIL) components. The deadline for proposals is June 25, 2021.

Canada and International Competitiveness: the COU has been reviewing Canada's and Ontario's competitive positions with respect to international students. Canada is among the Top 5 destinations for students in higher education. In Ontario, international enrolment at universities has tripled since 2009 to 90,000. However, Ontario is relatively expensive compared to the rest of Canada (and even much of the United States) for international students, and relies more heavily on students from China. This makes us more vulnerable to current geopolitical tensions.

Surveys of international students suggest that there was very little correlation between COVID case counts and preferred destination for university studies.

ITEM 11.0 – UNANIMOUS CONSENT AGENDA

Recommended: That the items listed in the Consent Agenda be approved or received for information by the Senate by unanimous consent.

The Senate's parliamentary authority -- *Sturgis Standard Code of Parliamentary Procedure* -- explains the consent agenda:

Organizations having a large number of routine matters to approve often save time by use of a *consent agenda*, also called a *consent calendar* or *unanimous consent agenda*. This is a portion of the printed agenda listing matters that are expected to be non-controversial and on which there are likely to be no questions.

Before taking the vote, the chair allows time for the members to read the list to determine if it includes any matters on which they may have a question, or which they would like to discuss or oppose. Any member has a right to remove any item from the consent agenda, in which case it is transferred to the regular agenda so that it may be considered and voted on separately. The remaining items are then unanimously approved *en bloc* without discussion, saving the time that would be required for individual votes.

While approval of an omnibus motion saves time at Senate meetings, Senate members will want to review the agenda materials carefully in order that they properly discharge their responsibilities.

How it works:

In consultation with Committee chairs and principal resource persons, the Secretary identifies action and information items that are routine and/or likely non-controversial. In each Committee's report, these items are noted in the list of items at the beginning of the report. Action and information items on the agenda and in committee reports that are not noted on the consent agenda will be presented singly for discussion and voting (when appropriate).

When members receive their Senate agendas, they should review all reports in the usual manner. **If any member wants to ask a question, discuss, or oppose an item that is marked for the consent agenda, he or she can have it be removed from the consent agenda** by contacting the Secretary of the Senate prior to the meeting or by asking that it be removed before the Chair calls for a mover and seconder for the motion to approve or receive, by unanimous consent, the items listed.

At the Senate meeting, before the unanimous consent motion is presented for approval, the Chair of the Senate (1) will advise the Senate of items that are to be removed from the list, based on prior requests from Senate members; and (2) will ask if there are any other items that should be removed from the list. The remaining items are then unanimously approved *en bloc* without discussion, saving the time that would be required for individual presentation and voting. Those matters that have been struck from the consent agenda will be handled in the usual way as each Committee's report is presented.

The minutes of the Senate meeting will report matters approved as part of the consent agenda as "carried by unanimous consent". Information items received as part of the consent agenda will be reported as received.

ITEM 11.1(a) – Schedule of Senate and Senate Committee Meetings (2021-22)

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

EXECUTIVE SUMMARY:

The schedule of regular meetings of Senate and its committees for the 2021-22 academic year is being presented to Senate, in accordance with the *Adopted Policies and Procedures of Senate*.

Note: The September to December 2021 meeting dates were previously presented to Senate in June 2020. Those dates have not changed.

ATTACHMENTS:

[2021-22 Senate Meeting Schedule](#)

[2021-22 Senate Standing Committee Meeting Schedule](#)

MEETINGS OF THE SENATE 2021-2022

Senate Meetings will take place on
Fridays at 1:30 p.m.
unless otherwise noted.

SENATE – 2021-2022
September 17, 2021
October 15, 2021
November 12, 2021
December 3, 2021
January 21, 2022
February 17, 2022
March 18, 2022
April 22, 2022
May 13, 2022
June 10, 2022

Senate and Senate Standing Committees Meeting Schedule – 2021-2022

SCUP (Mondays, 3:00 pm)	URB (Tuesdays, 1:00 pm)	SCAPA (Wednesdays, 2:30 pm)	Nominating (Thursdays, 9:30 am)	OAC (Thursdays, 3:00 pm)	Senate (Fridays, 1:30 pm)
Tues., Sept. 7, 2021		September 8, 2021	September 9, 2021	September 9, 2021	September 17, 2021
September 27, 2021	September 28, 2021	September 29, 2021	September 30, 2021	September 30, 2021	October 15, 2021
October 25, 2021	October 26, 2021	October 27, 2021	October 28, 2021	October 28, 2021	November 12, 2021
November 22, 2021	November 23, 2021	November 24, 2021	November 25, 2021	November 25, 2021	December 3, 2021
January 10, 2022		January 12, 2022	January 13, 2022	January 13, 2022	January 21, 2022
February 7, 2022		February 9, 2022	February 10, 2022	February 10, 2022	February 17, 2022
March 7, 2022	March 8, 2022	March 9, 2022	March 10, 2022	March 10, 2022	March 18, 2022
April 4, 2022	April 5, 2022	April 6, 2022	April 7, 2022	April 7, 2022	April 22, 2022
May 2, 2022	May 3, 2022	May 4, 2022	May 5, 2022	May 5, 2022	May 13, 2022
Tues., May 24, 2022	May 24, 2022	May 25, 2022	May 26, 2022	May 26, 2022	June 10, 2022

ITEM 11.1(b) – Senate Membership – Vacancies Filled by Appointment

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

The Senate seats listed below were filled by appointment for the terms indicated at the recommendation of the units concerned in accordance with the Senate Election Procedures.

ARTS AND HUMANITIES		
Mario Longtin <i>*to replace Angela Borchert who is on sabbatical</i>	French Studies	July 1, 2021 – Dec. 31, 2021
Kelly Olson <i>*to replace Mary Helen McMurran who is on sabbatical</i>	Classical Studies	July 1, 2021 – Dec. 31, 2021

HEALTH SCIENCES		
David Purcell <i>* to complete the term of Lisa Archibald who is on sabbatical</i>	Communication Sciences and Disorders	July 1, 2021 – June 30, 2022

SOCIAL SCIENCE		
Julie Schermer <i>* to replace Wolfgang Lehmann who is on sabbatical</i>	DAN Management	July 1, 2021 – Dec. 31, 2021

HURON UNIVERSITY COLLEGE		
Thomas Peace		July 1, 2021 – June 30, 2023

ITEM 11.2(a) – School of Graduate and Postdoctoral Studies: Revisions to the Master of Management of Applied Science (Applied Science Spoke)

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the Master of Management in Applied Science (Applied Science Spoke) be revised as shown.

EXECUTIVE SUMMARY:

Master of Management of Applied Science (Applied Science Spoke) students have expressed interest in more project management learning being added to the curriculum. The proposed pedagogical change to the existing Project Management course and the addition of a second Project Management course will allow for more depth and rigor in this subject area. The proposed changes will also prepare students to write industry exams if they so choose.

ATTACHMENT:

[Revisions to the Master of Management of Applied Science \(Applied Science Spoke\)](#)

Revisions to the Master of Management of Applied Science (Applied Science Spoke)

The purpose of this modification to the Master of Management of Applied Science (MMASc) (Applied Science Spoke) is to enhance student knowledge of the Project Management field. In speaking with industry partners, alumni and students, it is clear this is an essential functional area for the program's graduates in their typical career paths.

The Applied Science spoke in the MMASc program will offer a second, new Project Management course (referred to as Project Management TWO), building on the existing 0.5 FCE Project Management course offered by the Hub (COMMMGT 9330). While the latter will have a slightly altered pedagogy, the learning outcomes will remain the same.

After an assessment of the Applied Science spoke curriculum, and the MMASc program's objective to ensure students are job-market and/or industry-ready upon graduation from the MMASc's Applied Science spoke, the program proposes to:

1. Change the pedagogy of COMMMGT 9330 to allow for more depth in project management theory. This change in pedagogy:
 - i. allows for the application of project management knowledge using industry case studies and professional workplace examples, and
 - ii. better prepares students to pursue industry credentials if they so choose.
2. Replace the existing Applied Science spoke course, MMASC 9252Y Colloquium Series - 0.5 FCE, with the proposed (new) Applied Science spoke course, Project Management TWO (MMASC 9331B Project Management II) - 0.5 FCE

Students in Project Management ONE will benefit from a more robust curriculum that provides comprehensive theory and hands-on case study experience performed in small class teams. In Project Management TWO, Applied Science students will further benefit from their learnings in Project Management ONE by taking their skills into local organizations to gain industry project management experience.

The Applied Science spoke's guest-lectured seminars offered in MMASC 9252Y will be incorporated into the existing hub- and Applied Science spoke-instructed courses, providing instructors with the opportunity to incorporate a subject matter expert guest speaker specific to their course material into their curriculum. This ensures the value of the MMASC 9252Y guest-lectured seminars are not lost. Moreover, this change creates space to offer MMASc Applied Science students an advanced project management course (i.e., Project Management TWO) that provides greater project management knowledge and subject matter expertise and creates an opportunity to apply project management skills.

COMMMGT 9330 Project Management (referred to as Project Management ONE) will continue to be instructed by DAN Department of Management and Organizational Studies in the fall term as COMMMGT 9330A. The proposed addition of Project Management TWO, an experiential project management course, builds on the material covered in Project Management ONE. Project Management ONE's learning outcomes will prepare students to pursue industry-recognized micro-credentials in project management if they choose. These could include the Certified Associate in Project Management (CAPM) certification for project practitioners and Six Sigma for roles involving quality certification. Project Management TWO will be instructed by the Applied Science spoke in the winter term.

Table 1: Current Program - Applied Science Spoke

Term 1						Course Credits Earned
Mandatory Hub Courses	COMMMGT 9340Y Leadership in Organizations (0.25 FCE)	COMMMGT 9001Y Oral Communication (0.25 FCE)	COMMMGT 9330Y Project Management (0.25 FCE)	COMMMGT 9320A Fundamentals of Marketing (0.5 FCE)	COMMMGT 9111A Professional Writing (0.5 FCE)	1.75
Mandatory Applied Science Spoke Course	MMASC Professional Computing (0.5 FCE)	MMASC 9253Y Consulting (0.25 FCE)	MMASC 9252Y Colloquium (0.25 FCE)			1.0
Term 2						
Mandatory Hub Courses	COMMMGT 9340Y Leadership in Organizations (0.25 FCE)	COMMMGT 9001Y Oral Communication (0.25 FCE)	COMMMGT 9330Y Project Management (0.25 FCE)	COMMMGT 9310B Finance (0.5 FCE)	COMMMGT 9180B Org Behaviour (0.5 FCE)	1.75
Mandatory Applied Science Spoke Course	MMASC 9254B Data Analytics (0.5 FCE)	MMASC 9253Y Consulting (0.25 FCE)	MMASC 9252Y Colloquium (0.25 FCE)			1.0
Term 3						
1 Required Elective Courses	MMASC 9940 Co-Op Education Work Term (1.0 FCE)	MMASC 9941 Major Research Project (1.0 FCE)	MMASC 9942 Entrepreneurial Venture (1.0 FCE)			1.0
Milestones	Personal Career Management Seminar Academic Integrity Module					
Total Program, Credits Earned						6.5

Courses highlighted are (.5 FCE) courses which run biweekly over the course of the Fall and Winter terms

Proposed Program Modifications:

Term 1:

- COMMMGT 9330Y Project Management will move to an A term course from a Y
- To balance the timetable, Oral Communications and Leadership will move to an A from a Y and Consulting will move from a Y to a B term course

Term 2:

- Project Management TWO will replace MMASC 9252Y

Table 2: Proposed Program Modifications - Applied Science Spoke

Term 1						Course Credits Earned
Mandatory Hub Courses	COMMMGT 9340A Leadership in Organizations (0.5 FCE)	COMMMGT 9001A Oral Communication (0.5 FCE)	COMMMGT 9330A Project Management (0.5 FCE)	COMMMGT 9320A Fundamentals of Marketing (0.5 FCE)	COMMMGT 9111A Professional Writing (0.5 FCE)	2.5
Mandatory Applied Science Spoke Course	MMASC Professional Computing (0.5 FCE)					0.5
Term 2						
Mandatory Hub Courses	COMMMGT 9310B Finance (0.5 FCE)	COMMMGT 9180B Org Behaviour (0.5 FCE)				1.0
Mandatory Applied Science Spoke Course	MMASC 9254B Data Analytics (0.5 FCE)	MMASC 9253B Consulting (0.5 FCE)	NEW MMASC 9331B Project Management II (0.5 FCE)			1.5
Term 3						
1 Required Elective Courses	MMASC 9940 Co-Op Education Work Term (1.0 FCE)	MMASC 9941 Major Research Project (1.0 FCE)	MMASC 9942 Entrepreneurial Venture (1.0 FCE)			1.0
Milestones	Personal Career Management Seminar Academic Integrity Module					
Total Program, Credits Earned						6.5

The current cohort will finish their 12-month term in August 2021; therefore, current students will not be affected by the change as Project Management TWO course will commence in Winter 2022.

Note: Only students in the Applied Science spoke will take the proposed Project Management TWO. The Global Health Systems students enroll in a separate project management course developed by Global Health Systems.

ITEM 11.2(b)(i) – Schulich School of Medicine & Dentistry: Revisions to the Admission Requirements for the Major in Medical Sciences

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission requirements for the Major in Medical Sciences be revised as shown.

EXECUTIVE SUMMARY:

The admission requirements for the Major in Medical Sciences are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Physics and Astronomy will introduce Physics 1201A/B and 1202A/B and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021. Like all modules offered by the basic medical science departments, Physics 1201A/B and 1202A/B will be required for admission to the Major in Medical Sciences. A half course in calculus – either Calculus 1000A/B or 1500A/B – is required as a corequisite for Physics 1201A/B. One of Calculus 1000A/B or 1500A/B will become mandatory for admission to the Major in Medical Sciences so that students will have the necessary corequisite for Physics 1201A/B. Mathematics 1225A/B, which lists both Calculus 1000A/B and 1500A/B as antirequisite courses, will be removed from the list of additional half courses in mathematics that must be taken to complete the 1.0 mathematics course required for admission to the Major in Medical Sciences.

The first-year physics requirement will no longer be able to be deferred until second year. Since adjudication for admission to this module is done by an automated process that checks only admission requirements, students admitted to this module have been able to progress in it without completing the first-year physics course. At the request of the Academic Counselling Office for Science and Basic Medical Science students, the first-year physics course will be included in the admission requirements for the module but not listed as a principal course. Minimum marks of 60% will be required in each half course in physics but these half courses will not be included in the group of principal courses for which an average of at least 70% is required for admission to the Major in an Honours degree containing Double Majors.

Courses that have been introduced to replace Applied Mathematics 1413 for students in Engineering will not be listed in the Admission Requirements to reduce confusion. Special permission will be granted to students who have completed the half courses that have replaced Applied Mathematics 1413 (with marks of at least 60% in each half course) who wish to register in a Major in Medical Sciences.

ATTACHMENT:

[Revised Calendar Copy – Major in Medical Sciences](#)

REVISED CALENDAR COPY

<https://westerncalendar.uwo.ca/Modules.cfm?ModuleID=21174>

MAJOR IN MEDICAL SCIENCES

ADMISSION REQUIREMENTS

Completion of first-year requirements, including a mark of at least 60% in each of the 3.0 (full or half) principal courses below:

1.0 course: Biology 1001A and Biology 1002B*.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B.

0.5 course from: Calculus 1000A/B, Calculus 1500A/B.

0.5 course from: Applied Mathematics 1201A/B, Calculus 1301A/B, Calculus 1501A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Statistical Sciences 1024A/B.

~~1.0 course from: Applied Mathematics 1201A/B, Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Statistical Sciences 1024A/B, Applied Mathematics 1413.~~

Note: the former Applied Mathematics 1413 may be used in place of the 1.0 mathematics course listed above

The following must **also** be completed ~~by the end of second year~~ **as an Admission Requirement** with a mark of at least 60% in each half course:

0.5 course from: **Physics 1201A/B****, Physics 1501A/B, **the former courses:** Physics 1028A/B, Physics 1301A/B.

0.5 course from: **Physics 1202A/B**, Physics 1502A/B, **the former courses:** Physics 1029A/B, Physics 1302A/B.

It is recommended that the two half courses in Physics be taken in the Fall and Winter terms of the same academic year.

* Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B.

****Physics 1101A/B with a mark of at least 80% may be used in place of Physics 1201A/B. A substitution of Physics 1102A/B for Physics 1202A/B will not be permitted for admission to the Major in Medical Sciences. Note that admission to all other modules offered by the basic medical science departments requires Physics 1201A/B and 1202A/B and substitutions will be not permitted.**

ITEM 11.2(b)(ii) – Schulich School of Medicine & Dentistry: Revisions to the Admission Requirements of the DDS Program (Changes to GPA calculation due to COVID-19)

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That the admission requirements of the DDS program be revised as shown, for the 2020-21 application cycle to correct an administrative omission.

EXECUTIVE SUMMARY:

COVID-19 resulted in the quick transition of many universities from an in-person setting to an online setting, with altered methods of evaluation and reporting of final grades for the Winter 2020 term. Thus, determining an equitable means for evaluating academic rigor and success within the variability of grades reported for winter 2020 was needed.

On June 5, 2020 Senate approved revisions to the admission requirements of the DDS program to allow for changes to GPA calculation due to COVID-19.

For applicants presenting the 2019-2020 academic year affected by the COVID-19 pandemic as one of the academic years for GPA consideration, Senate approved that:

- During the 2019-2020 academic year, applicants must have completed 5 full or equivalent courses (minimum 30 credit hours) taken between September and April of which 3 full-course equivalents (18 credit hours) must have a published academic level at, or above, the year of study, and
- The GPA will be calculated on grades from the fall 2019 semester only. Due to the transition of many universities to pass/fail or credit/no credit, grades from the winter 2020 semester will not be used in the calculation of GPA in order to ensure a fair assessment for all candidates.

On November 13, 2020 Senate approved a revision that provided the clarification that only 1.0 full or equivalent pass/fail course (6 credit hours) was permissible in the fall 2019 semester.

The current request is to amend the criteria to indicate that courses taken during the application cycle are not eligible for academic average consideration for students presenting two undergraduate years for GPA consideration that do not including the 2019-20 academic year affected by the COVID-19 pandemic. By omission, this requested amendment was not previously identified by the Schulich School of Medicine and Dentistry. The current request will bring the policy into alignment with the practice that was followed for the DDS admissions process.

ATTACHMENT:

[Revised Calendar Copy – Admission – Dentistry](#)

REVISED CALENDAR COPY

https://www.uwo.ca/univsec/pdf/academic_policies/admission/dentistry.pdf

ADMISSION – DENTISTRY

The first part of the policy is unchanged

Competitiveness

In order to be considered, candidates must have achieved at least 80% or higher in each of the two best undergraduate years with a full course load of 5.0 full or equivalent courses (30 credit hours) taken between September and April. Each of the two best years used for GPA consideration must also have at least 3.0 full course equivalents whose published level is at or above the year level of study. Past class statistics have indicated that most successful applicants have a mid to high 80s average over their two most competitive years. Consideration will be given to the most competitive two academic years, DAT scores and supplemental requirements. Overall academic performance (consistency, trend) and graduate education can also be used as selection criteria.

Consideration of the 2019-2020 Academic Year Affected by the Covid-19 Pandemic:

If you are presenting two undergraduate years for GPA consideration that do not include the 2019-2020 academic year affected by the COVID-19 pandemic, all of the following must be met:

Courses taken during the application cycle are NOT eligible for academic average consideration.

- You must meet or exceed the minimum GPA in each of your two best undergraduate years of full-time study (**one of which may be the current year**). Full-time study is defined as five full or equivalent courses (30 credit hours), taken between September and April.
- Each of the two years must contain at least three full-course equivalents (18 credit hours) whose published academic level is at, or above, the year of study.
- Only one full or equivalent pass/fail course (6 credit hours) will be permissible in each of the two years being considered for the GPA.

If you are presenting the 2019-2020 academic year affected by the COVID-19 pandemic as one of your academic years for GPA consideration, all of the following must be met:

- During the 2019-2020 academic year, you must have completed 5 full or equivalent courses (minimum 30 credit hours) taken from September to April of which 3 full-course equivalents (18 credit hours) must have a published academic level at, or above, the year of study.
- The GPA will be calculated on grades from the fall 2019 semester only. Due to the transition of many universities to pass/fail or credit/no credit, grades from the winter 2020 semester will not be used in the calculation of GPA in order to ensure a fair assessment for all candidates.
- Only 1.0 equivalent pass/fail course(s) (6 credit hours) will be permissible in the fall 2019 term (September-December). The pass/fail course(s) must be passed. Discovery Credits (Western students) will be considered within, not in addition to, the 1.0 course pass/fail allowance.

For applicants who have completed an undergraduate degree and who are in the final year of (or who have recently completed) a subsequent undergraduate degree, grades earned during the previous degree(s) will not be considered. The most recent degree must be equivalent to a four-year degree. Courses taken during the application cycle are not considered towards GPA.

Applicants are ranked on a compiled score. For more information about the elements in ranking please refer to the Admissions webpage. The quality of the applicant pool in which one is considered for entry could raise the minimum academic competitive level, and will determine the minimum thresholds.

A limited number of positions are available for international students who maintain their international status at graduation. Please see the [International Applicants](#) webpage for further details.

Special consideration will be given to applicants self-identify as Indigenous. Two positions are set aside each year for competitive applicants with official documentation of indigenous status or ancestral Indigenous origin. For more information, please visit the [Indigenous Applicants](#) webpage.

The remainder of the policy is unchanged

ITEM 11.2(c)(i) – Faculty of Science, Department of Applied Mathematics: Withdrawal of the Major in Theoretical Physics and the Minor in Mathematical and Numerical Methods

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the Major in Theoretical Physics and the Minor in Mathematical and Numerical Methods be withdrawn.

EXECUTIVE SUMMARY:

The Major in Theoretical Physics has historically had low enrolment numbers: six in 2016-17, two in 2017-18, and two in 2018-19. No students are currently enrolled in the module. Students with interests in theoretical physics are well-served by completing an Honours Specialization or Specialization in Physics, Astrophysics, or Medical Physics, together with additional advanced courses in the Minor in Advanced Physics. The Major in Theoretical Physics is therefore being withdrawn as redundant. A separate DAP proposal will be submitted to broaden the Minor in Advanced Physics to have it better serve students interested in theoretical physics.

The Minor in Mathematical and Numerical Methods has also historically had very low enrollment numbers: zero in 2016-17, zero in 2017-18 and one Year 4 student in 2018-19. This Minor has a strong overlap with the Major in Scientific Computation and Numerical Methods (the major is the minor plus 1.0 Computer Science course and 1.0 upper-level Math or Applied Mathematics course). The Major in Scientific Computation and Numerical Methods would be the best alternative for students in the future.

MAJOR IN THEORETICAL PHYSICS:

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21067>

MINOR IN MATHEMATICAL AND NUMERICAL METHODS:

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21069>

ITEM 11.2(c)(ii) – Faculty of Science, Department of Applied Mathematics: Revisions to the Admission and Program Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission and program requirements for the modules offered by the Department of Applied Mathematics (listed below) be revised as shown.

Honours Specialization in Applied Mathematics
Honours Specialization in Mathematical and Statistical Sciences
Major in Applied Mathematical Methods
Major in Applied Mathematics
Major in Scientific Computing and Numerical Methods
Minor in Applied Mathematics
Specialization in Applied Mathematics

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Applied Mathematics are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020. Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B.

The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B, and 1202A/B, and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021.

For the Major module in Scientific Computing and Numerical Methods, one of modular courses, Applied Mathematics 3911F/G (Modelling and Simulation), will be withdrawn as it duplicates (and is already anti-requisite with) Physics 3926 Computer Simulations in Physics. Admission requirements for the module are being revised to include first-year physics; prerequisites for Physics 3926 will also be revised in a separate DAP. A few extra course options are also being proposed to update the module.

Note: Due to the dissolution of the Department of Applied Mathematics, effective July 1, 2021, administration of the above modules will move to the Department of Mathematics and the Department of Physics and Astronomy effective July 1, 2021 as detailed in Item 6.4(i).

ATTACHMENT:

[Revised Calendar Copy](#)

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21070>

HONOURS SPECIALIZATION IN APPLIED MATHEMATICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including either 0.5 course from Calculus 1000A/B, or Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B,** and either 0.5 course from Calculus 1301A/B, or Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B, the former Applied Mathematics 1414A/B,** plus 2.0 additional courses, with no mark in these principal courses below 60%. **The former Applied Mathematics 1413** may be substituted for **the** 1.0 Calculus course requirements.

Mathematics 1600A/B, or the former Linear Algebra 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B,** with a mark of at least 60%, is normally taken in year 1 and completed by the end of Term 1 in Year 2. If not taken in year 1, it must be completed in first term of year 2.

Applied Mathematics 1999F/G, while not required, will be useful to students in this module.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21071>

HONOURS SPECIALIZATION IN MATHEMATICAL AND STATISTICAL SCIENCES

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including either 0.5 course from Calculus 1000A/B, or Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B,** and either 0.5 course from Calculus 1301A/B, or Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B, the former Applied Mathematics 1414A/B,** plus 2.0 additional courses, with no mark in these principal courses below 60%. **The former Applied Mathematics 1413 may be substituted for the 1.0 Calculus course requirements.**

Students who take Calculus 1301A/B must have a mark of at least 85% in the course. **Applied Mathematics 1413** may be substituted for 1.0 Calculus course requirements.

Mathematics 1600A/B, or the former Linear Algebra 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B,** with a mark of at least 60%, is normally taken in year 1 and completed by the end of Term 1 in Year 2. If not taken in year 1, it must be taken in first term of year 2.

Statistical Sciences 1023A/B is recommended, while not required, will be useful for students in this module.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21065>

MAJOR IN APPLIED MATHEMATICAL METHODS

Admission Requirements

Completion of first-year requirements, including either **0.5 course from** Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B,** and either **0.5 course from** Calculus 1301A/B, or Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B, the former Applied Mathematics 1414A/B** with a mark of at least 60% for each. **The former** Applied Mathematics 1413 (with a mark of at least 60%) may be used to replace **substituted for** the 1.0 Calculus course requirement. **Each of these courses requires a minimum mark of 60%.**

Mathematics 1600A/B, or the former Linear Algebra 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former** Applied Mathematics 1411A/B, with a mark of at least 60% **and completed by the end of Term 1 in Year 2,** if not taken in year 1, it must be taken in first term of year 2.

Applied Mathematics 1999F/G, while not required, will be useful for students in this module.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21064>

MAJOR IN APPLIED MATHEMATICS

Admission Requirements

Completion of first-year requirements, including either **0.5 course from** Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B,** and either **0.5 course from** Calculus 1301A/B, or Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B, the former Applied Mathematics 1414A/B** with a mark of at least 60% for each. **The former** Applied Mathematics 1413 (with a mark of at least 60%) may be used to replace **substituted for** the 1.0 Calculus course requirement. **Each of these courses requires a minimum mark of 60%.**

Mathematics 1600A/B, or the former Linear Algebra 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former** Applied Mathematics 1411A/B, with a mark of at least 60% **and completed by the end of Term 1 in Year 2,** if not taken in year 1, it must be taken in first term of year 2.

Applied Mathematics 1999F/G, while not required, will be useful for students in this module.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21066>

MAJOR IN SCIENTIFIC COMPUTING AND NUMERICAL METHODS

Admission Requirements

Completion of first-year requirements **including the following courses, each with a mark of at least 60% including either :**

1.0 course from: (Calculus 1000A/B, Calculus 1500A/B ~~or the former Calculus 1100A/B~~, **Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B**) and either (Calculus 1301A/B, ~~or~~ Calculus 1501A/B (recommended), **Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1414A/B**); ~~or the former Applied Mathematics 1413~~. **Applied Mathematics 1413** may be used to replace this 1.0 Calculus course requirement. Each of these require a minimum mark of at least 60%.

1.0 course from: (Physics 1201A/B, Physics 1401A/B, Physics 1501A/B or the former Physics 1301A/B) and (Physics 1202A/B, Physics 1402A/B, Physics 1502A/B or the former Physics 1302A/B).

1.0 course from: Computer Science 1025A/B or Computer Science 1026A/B and Computer Science 1027A/B **with at least 60% in each.**

Mathematics 1600A/B or Applied Mathematics 1411A/B with a mark of at least 60% for either, if not taken in year 1, must be taken in the first term of year 2.

Students must complete Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Linear Algebra 1600A/B with a minimum mark of 55% by the end of Term 1 in Year 2.

~~Applied Mathematics 1999F/G, while not required, will be useful for students in this module.~~

Module

6.0 Courses:

0.5 course: Applied Mathematics 2814F/G ~~or the former Applied Mathematics 2813B~~.

0.5 course from: Calculus 2302A/B or Calculus 2502A/B.

0.5 course from: Calculus 2303A/B or Calculus 2503A/B.

0.5 course: Applied Mathematics 2402A ~~or the former Differential Equations 2402A~~.

0.5 course: **Physics 3926F/G or the former** Applied Mathematics 3911F/G.

0.5 course from: ~~Applied Mathematics 3413A/B or~~ **Numerical and Mathematical Methods 3415A/B or the former Applied Mathematics 3415A/B**, Applied Mathematics 3815A/B, **Physics 3151A/B**; ~~or the former Applied Mathematics 3413A/B~~.

1.0 course from: EITHER Statistical Sciences 2141A/B and 0.5 course at the 2100 level or above in Applied Mathematics, Mathematics, **Numerical and Mathematical Methods, Physics** or Statistical and Actuarial Science, OR Statistical Sciences 2857A/B ~~or the former Statistical Sciences 2657A~~ and Statistical Sciences 2858A/B.

1.0 course: Computer Science 2210A/B, Computer Science 2211A/B.

1.0 course from: Applied Mathematics 4613A/B**, Applied Mathematics 4615F/G*, **Numerical and Mathematical Methods 4617A/B* or the former Applied Mathematics 4617A/B***, **Applied Mathematics 4815A/B**, **Numerical and Mathematical Methods 4817A/B* or the former Applied Mathematics 4817A/B**, **Applied Mathematics 4264A/B**, **Chemistry 3300F/G*****, **Chemistry 4444A/B*****, **Physics 4910G******.

* May be offered only in odd-numbered academic years.

**May be offered only in even-numbered academic years.

*** **Only possible for students who have the appropriate Chemistry prerequisites.**

**** **Only possible for students who have the appropriate Physics prerequisites.**

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21068>

MINOR IN APPLIED MATHEMATICS

Admission Requirements

Completion of first-year requirements, including **0.5 course from** Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B**, and either **0.5 course from** Calculus 1301A/B, or Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B, the former Applied Mathematics 1414A/B** with a mark of at least 60% for each. **The former Applied Mathematics 1413 (with a mark of at least 60%) may be used to replace substituted for the 1.0 Calculus course requirement. Each of these requires a minimum mark of 60%.**

Mathematics 1600A/B, or the former Linear Algebra 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B**, with a mark of at least 60% **and completed by the end of Term 1 in Year 2**, if not taken in year 1, it must be taken in first term of year 2.

Applied Mathematics 1999F/G, while not required, will be useful for students in this module.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21072>

SPECIALIZATION IN APPLIED MATHEMATICS

Admission Requirements

Completion of first-year requirements, including **1.0 of the following with a mark of at least 60%: either 0.5 course from** Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B**, and either **0.5 course from** Calculus 1301A/B, or Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B, the former Applied Mathematics 1414A/B**. **The former Applied Mathematics 1413 (with a mark of at least 60%) may be substituted for the 1.0 Calculus course requirement. Each of these requires a minimum mark of 60%.**

Mathematics 1600A/B, or the former Linear Algebra 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B**, with a mark of at least 60% **and completed by the end of Term 1 in Year 2**, is normally taken in Year 1. If not taken in Year 1, it must be taken in the first term of Year 2.

Applied Mathematics 1999F/G, while not required, will be useful for students in this module.

ITEM 11.2(c)(iii) – Faculty of Science, Department of Biology: Revisions to the Admission Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission requirements for the modules offered by the Department of Biology in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Animal Behaviour (BSc)
Honours Specialization in Biodiversity and Conservation
Honours Specialization in Biology
Specialization in Biology
Major in Biology
Honours Specialization in Genetics
Major in Genetics
Honours Specialization in Genetics and Biochemistry
Honours Specialization in Synthetic Biology
Major in Ecosystem Health

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Biology are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020. Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B.

The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B, 1202A/B, 1401A/B, and 1402A/B and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021.

The Honours Specialization in Genetics and Biochemistry requires Physics 1202A/B, which has a Pre or Corequisites of Calculus 1000A/B or Calculus 1500A/B. Hence, these Calculus courses are added to the admission requirements, and consequently, Mathematics 1225A/B is removed as it is an antirequisite.

The Faculty of Science will introduce Data Science 1000A/B and withdraw Statistical Sciences 1024A/B as of September 1, 2021.

ATTACHMENT:

[Revised Calendar Copy](#)

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21133>

HONOURS SPECIALIZATION IN ANIMAL BEHAVIOUR (BSc)

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B; Chemistry 1301A/B and Chemistry 1302A/B; Psychology 1000, with no mark in these principal courses below 60%.

0.5 course from: **Physics 1201A/B**, ~~Physics 1028A/B~~, ~~Physics 1301A/B~~ or **Physics 1401A/B**, Physics 1501A/B; **the former Physics 1028A/B**, **the former Physics 1301A/B**.

1.0 course from: ~~Applied Mathematics 1201A/B~~, ~~Applied Mathematics 1413~~, ~~Calculus 1000A/B~~, ~~Calculus 1301A/B~~, ~~Calculus 1500A/B~~ or ~~Calculus 1501A/B~~, **Calculus 1000A/B** or **Calculus 1500A/B**, **Calculus 1301A/B** or **Calculus 1501A/B**, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, ~~Statistical Sciences 1024A/B~~, **Applied Mathematics 1201A/B**, **Numerical and Mathematical Methods 1411A/B**, **Numerical and Mathematical Methods 1412A/B**, **Numerical and Mathematical Methods 1414A/B**; or the former Calculus 1100A/B, the former Linear Algebra 1600A/B, **the former Applied Mathematics 1411A/B**, **the former Applied Mathematics 1412A/B**, **the former Applied Mathematics 1414A/B**, **the former Applied Mathematics 1413**. If not completed in **Year 1** first year, the Mathematics requirement must be completed by the end of **Year 2** second year.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21134>

HONOURS SPECIALIZATION IN BIODIVERSITY AND CONSERVATION

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B; Chemistry 1301A/B and Chemistry 1302A/B or ~~the former Chemistry 1100A/B~~ and ~~the former Chemistry 1200B~~; plus 1.0 additional course, with no mark in any of these principal courses below 60%.

0.5 course from: **Physics 1201A/B**, ~~Physics 1028A/B~~, ~~Physics 1301A/B~~ or **Physics 1401A/B**, Physics 1501A/B; **the former Physics 1028A/B**, **the former Physics 1301A/B**.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, **Data Science 1000A/B**, ~~Statistical Sciences 1024A/B~~, Applied Mathematics 1201A/B, **Numerical and**

Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Calculus 1100A/B, the former Linear Algebra 1600A/B the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B. If not completed in **Year 1 first year**, the Mathematics requirement must be completed by the end of **Year 2 second year**.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21135>

HONOURS SPECIALIZATION IN BIOLOGY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B; Chemistry 1301A/B and Chemistry 1302A/B **or the former Chemistry 1100A/B and the former Chemistry 1200B**; plus 1.0 additional course, with no mark in any of these principal courses below 60%.

0.5 course from: **Physics 1201A/B**, **Physics 1028A/B**, **Physics 1301A/B** or **Physics 1401A/B**, Physics 1501A/B; **the former Physics 1028A/B, the former Physics 1301A/B.**

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, **Data Science 1000A/B**, **Statistical Sciences 1024A/B**, **Applied Mathematics 1201A/B**, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Calculus 1100A/B, the former Linear Algebra 1600A/B the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B.** If not completed in **Year 1 first year**, the Mathematics requirement must be completed by the end of **Year 2 second year**.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21138>

SPECIALIZATION IN BIOLOGY

Admission Requirements

Completion of first year requirements including a minimum mark of 60% in each of Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B.~~

0.5 course from: **Physics 1201A/B**, ~~Physics 1028A/B, Physics 1301A/B or~~ **Physics 1401A/B**, Physics 1501A/B; ~~the former Physics 1028A/B, the former Physics 1301A/B.~~

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, **Data Science 1000A/B**, ~~Statistical Sciences 1024A/B, Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B;~~ ~~or the former Calculus 1100A/B, the former Linear Algebra 1600A/B, the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B.~~ If not completed in **Year 1** ~~first year~~, the Mathematics requirement must be completed by the end of **Year 2** ~~second year~~.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21128>

MAJOR IN BIOLOGY

Admission Requirements

Completion of first year requirements with no failures including a minimum mark of 60% in each of Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B.~~

0.5 course from: **Physics 1201A/B**, ~~Physics 1028A/B, Physics 1301A/B or~~ **Physics 1401A/B**, Physics 1501A/B; ~~the former Physics 1028A/B, the former Physics 1301A/B.~~

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, **Data Science 1000A/B**, ~~Statistical Sciences 1024A/B, Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and~~

Mathematical Methods 1414A/B; or the former Calculus 1100A/B, the former Linear Algebra 1600A/B the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B. If not completed in Year 1 first year, the Mathematics requirement must be completed by the end of Year 2 second year.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21136>

HONOURS SPECIALIZATION IN GENETICS

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B; Chemistry 1301A/B and Chemistry 1302A/B; plus 1.0 additional course, with no mark in any of these principal courses below 60%.

0.5 course from: **Physics 1201A/B**, ~~Physics 1028A/B~~, ~~Physics 1301A/B~~ or **Physics 1401A/B**, Physics 1501A/B; **the former Physics 1028A/B, the former Physics 1301A/B.**

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, **Data Science 1000A/B**, ~~Statistical Sciences 1024A/B~~, Applied Mathematics 1201A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B**; or the former Calculus 1100A/B, the former Linear Algebra 1600A/B the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B. If not completed in Year 1 first year, the Mathematics requirement must be completed by the end of Year 2 second year.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21130>

MAJOR IN GENETICS

Admission Requirements

Completion of first year requirements with no failures including a minimum mark of 60% in each of Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B. Chemistry 1301A/B and Chemistry 1302A/B.

0.5 course from: **Physics 1201A/B, Physics 1028A/B, Physics 1301A/B or Physics 1401A/B, Physics 1501A/B; the former Physics 1028A/B or the former Physics 1301A/B.**

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, **Data Science 1000A/B, Statistical Sciences 1024A/B, Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B;** or the former Calculus 1100A/B, the former Linear Algebra 1600A/B, the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B. If not completed in **Year 1 first year**, the Mathematics requirement must be completed by the end of **Year 2 second year**.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21137>

HONOURS SPECIALIZATION IN GENETICS AND BIOCHEMISTRY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 4.0 principal courses with no mark in these principal courses below 60%.

1.0 course from: Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B.

1.0 course **from**: Chemistry 1301A/B and Chemistry 1302A/B.

1.0 course from: **Applied Mathematics 1201A/B, Applied Mathematics 1413, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Statistical Sciences 1024A/B.**

0.5 course from: Calculus 1000A/B, Calculus 1500A/B, Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B.

0.5 course from: Calculus 1301A/B, Calculus 1501A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1414A/B, Data Science 1000A/B, Applied Mathematics 1201A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Statistical Sciences 1024A/B.

The former Applied Mathematics 1413 can be used to fulfill the 1.0 mathematics requirement.

1.0 course from: Physics 1028A/B or Physics 1301A/B or Physics 1501A/B and Physics 1029A/B or Physics 1302A/B or Physics 1502A/B.

0.5 course from: Physics 1201A/B, Physics 1401A/B, Physics 1501A/B; the former Physics 1028A/B, the former Physics 1301A/B.

0.5 course from: Physics 1202A/B, Physics 1402A/B, Physics 1502A/B; the former Physics 1029A/B, the former Physics 1302A/B.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21637>

HONOURS SPECIALIZATION IN SYNTHETIC BIOLOGY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark below 60% in any of these half courses, including:

1.0 course from: Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B,

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, and

1.0 course from: ~~Applied Mathematics 1201A/B, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B,~~ **Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B,** Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, ~~Statistical Sciences 1024A/B~~ **Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.**

A minimum mark of 60% is also required in one of the following half courses which is not included in the principal courses:

0.5 course from: **Physics 1201A/B,** ~~Physics 1028A/B, Physics 1301A/B or~~ **Physics 1401A/B,** Physics 1501A/B; **the former Physics 1028A/B, the former Physics 1301A/B.**

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21129>

MAJOR IN ECOSYSTEM HEALTH

Admission Requirements

Completion of first year requirements, including Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B with a mark of at least 60% in each.

Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B;~~

0.5 course from: **Physics 1201A/B**, ~~Physics 1028A/B, Physics 1301A/B or~~ **Physics 1401A/B**, Physics 1501A/B; ~~the former Physics 1028A/B, the former Physics 1301A/B.~~

1.0 course from: Calculus 1000A/B, ~~Calculus 1301A/B,~~ **or** Calculus 1500A/B, **Calculus 1301A/B or** Calculus 1501A/B, ~~or the former Calculus 1100A/B,~~ Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, ~~or the former Linear Algebra 1600A/B, Statistical Sciences 1024A/B,~~ Applied Mathematics 1201A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B;** ~~the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.~~ If not completed in **Year 1** ~~first year,~~ the Mathematics requirement must be completed by the end of **Year 2** ~~second year.~~

Highly recommended: Environmental Science 1021F/G, ~~the former Earth Sciences 1088F/G.~~

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

ITEM 11.2(c)(iv) – Faculty of Science, Department of Chemistry: Revisions to the Admission Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission requirements for the modules offered by the Department of Chemistry in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Biochemistry and Chemistry
Honours Specialization in Chemistry
Specialization in Chemistry
Major in Chemistry
Minor in Chemistry

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Chemistry are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020. Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B.

The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B, 1202A/B, 1401A/B, and 1402A/B and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021.

The proposal also removes Mathematics 1225A/B when Calculus 1000A/B (an antirequisite) is listed as a requirement and removes reference to courses deleted more than 5 years ago (the former Chemistry 1100A/B, the former Chemistry 1200B and the former Calculus 1100A/B).

ATTACHMENT:

[Revised Calendar Copy](#)

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21076>

HONOURS SPECIALIZATION IN BIOCHEMISTRY AND CHEMISTRY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses with no mark less than 60% in any course, including:

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, **or the former Chemistry 1100A/B and the former Chemistry 1200B.**

1.0 course: Biology 1001A and Biology 1002B.

1.0 course from: **(Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B); and (one of Applied Mathematics 1201A/B, Applied Mathematics 1413, or Calculus 1301A/B, or Calculus 1501A/B, or Mathematics 1600A/B, or Mathematics 1225A/B or Mathematics 1229A/B or Numerical and Mathematical Methods 1411A/B or Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1411A/B or the former Numerical and Mathematical Methods 1414A/B), or the former Applied Mathematics 1413. (An average in the two courses of at least 60% is required.)**

1.0 course from: **(Physics 1201A/B, Physics 1028A/B or Physics 1301A/B or Physics 1401A/B or Physics 1501A/B or the former Physics 1028A/B or the former Physics 1301A/B) and (Physics 1202A/B, Physics 1029A/B or Physics 1302A/B or Physics 1402A/B or Physics 1502A/B or the former Physics 1029A/B or the former Physics 1302A/B).** (This 1.0 course is required but is not considered to be a principal course.)

Note: Biology 1201A with a minimum mark of 70% can be used to replace Biology 1001A, and Biology 1202B with a minimum mark of 70% can be used to replace Biology 1002B.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21077>

HONOURS SPECIALIZATION IN CHEMISTRY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark less than 60% in any course including:

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, **or the former Chemistry 1100A/B and the former Chemistry 1200B.**

1.0 course from: (**Physics 1201A/B** ~~Physics 1028A/B or Physics 1301A/B~~ or **Physics 1401A/B** or Physics 1501A/B or the former **Physics 1028A/B** or the former **Physics 1301A/B**) and (**Physics 1202A/B** ~~Physics 1029A/B or Physics 1302A/B~~ or **Physics 1402A/B** or Physics 1502A/B or the former **Physics 1029A/B** or the former **Physics 1302A/B**).

1.0 course from: (**Calculus 1000A/B**, or **Calculus 1500A/B** or **Numerical and Mathematical Methods 1412A/B** or the former **Applied Mathematics 1412A/B** the former **Calculus 1100A/B**) and (~~one of~~ **Applied Mathematics 1201A/B**, ~~Applied Mathematics 1413~~, or **Calculus 1301A/B**, or **Calculus 1501A/B**, or **Mathematics 1600A/B**, or ~~Mathematics 1225A/B~~ or **Mathematics 1229A/B** or **Numerical and Mathematical Methods 1411A/B** or **Numerical and Mathematical Methods 1414A/B** or the former **Applied Mathematics 1411A/B** or the former **Numerical and Mathematical Methods 1414A/B**), or the former **Applied Mathematics 1413**.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21078>

SPECIALIZATION IN CHEMISTRY

Admission Requirements

Completion of first year requirements, including the following 3.0 courses with no mark less than 60%:

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, ~~or the former Chemistry 1100A/B and the former Chemistry 1200B.~~

1.0 course from: (**Physics 1201A/B** ~~Physics 1028A/B or Physics 1301A/B~~ or **Physics 1401A/B** Physics 1501A/B or the former **Physics 1028A/B** or the former **Physics 1301A/B**) and (**Physics 1202A/B** ~~Physics 1029A/B or Physics 1302A/B~~ or **Physics 1402A/B** or Physics 1502A/B or the former **Physics 1029A/B** or the former **Physics 1302A/B**).

1.0 course from: (**Calculus 1000A/B**, or **Calculus 1500A/B** or **Numerical and Mathematical Methods 1412A/B** or the former **Applied Mathematics 1412A/B**) and (~~one of~~ **Applied Mathematics 1201A/B**, ~~Applied Mathematics 1413~~, or **Calculus 1301A/B**, or **Calculus 1501A/B**, or **Mathematics 1600A/B**, or ~~Mathematics 1225A/B~~ or **Mathematics 1229A/B** or **Numerical and Mathematical Methods 1411A/B** or **Numerical and Mathematical Methods 1414A/B** or the former **Applied Mathematics 1411A/B** or the former **Numerical and Mathematical Methods 1414A/B**), or the former **Applied Mathematics 1413**.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21073>

MAJOR IN CHEMISTRY

Admission Requirements

Completion of first year requirements, including the following 3.0 courses with no mark less than 60%:

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B or the former Chemistry 1100A/B and the former Chemistry 1200B.

1.0 course from: (Physics 1201A/B or Physics 1028A/B or Physics 1301A/B or Physics 1401A/B or Physics 1501A/B or the former Physics 1028A/B or the former Physics 1301A/B) and (Physics 1202A/B or Physics 1029A/B or Physics 1302A/B or Physics 1402A/B or Physics 1502A/B or the former Physics 1029A/B or the former Physics 1302A/B).

1.0 course from: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B); and (one of Applied Mathematics 1201A/B, or Applied Mathematics 1413, or Calculus 1301A/B, or Calculus 1501A/B, or Mathematics 1600A/B, or Mathematics 1225A/B or Mathematics 1229A/B or Numerical and Mathematical Methods 1411A/B or Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1411A/B or the former Numerical and Mathematical Methods 1414A/B), or the former Applied Mathematics 1413.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21074>

MINOR IN CHEMISTRY

Admission Requirements

Completion of first year requirements, including the following 2.0 courses with no mark less than 60% in any course:

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B, or the former Chemistry 1100A/B and the former Chemistry 1200B.

1.0 course from: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B); and (one of Applied Mathematics 1201A/B, or Applied Mathematics 1413, or Calculus 1301A/B, or Calculus 1501A/B, or Mathematics 1600A/B, or Mathematics 1225A/B or Mathematics 1229A/B or Numerical and Mathematical Methods 1411A/B or Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1411A/B or the former Numerical and Mathematical Methods 1414A/B), or the former Applied Mathematics 1413.

ITEM 11.2(c)(v) – Faculty of Science, Department of Computer Science: Revisions to the Admission Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission requirements for the modules offered by the Department of Computer Science in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Bioinformatics
Honours Specialization in Computer Science
Specialization in Computer Science
Major in Computer Science
Minor in Computer Science
Honours Specialization in Information Systems

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Computer Science are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020.

Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B.

ATTACHMENT:

[Revised Calendar Copy](#)

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21121>

HONOURS SPECIALIZATION IN BIOINFORMATICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 4.0 principal courses, with no mark in these principal courses below 60%, including:

Biology 1001A and Biology 1002B; Chemistry 1301A/B and Chemistry 1302A/B;

Computer Science 1025A/B or Computer Science 1026A/B or Engineering Science 1036A/B; Computer Science 1027A/B or Computer Science 1037A/B, in **each either** case with a mark of at least 65%;

1.0 course from: Applied Mathematics 1201A/B, ~~Applied Mathematics 1413~~, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.**

Note: Biology 1201A with a mark of at least 70% may be used in place of Biology 1001A, and Biology 1202B with a mark of at least 70% may be used in place of Biology 1002B. **Some Computer Science electives (e.g., Computer Science 3388A/B, Computer Science 4442A/B, and Computer Science 4482A/B) require Mathematics 1600A/B as a pre-requisite.**

Students taking this module must see a Departmental Counsellor in Computer Science for advice concerning the order in which courses have to be taken.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21123>

HONOURS SPECIALIZATION IN COMPUTER SCIENCE

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%, including:

0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B or Engineering Science 1036A/B (in each case with a mark of at least 65%);

0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);

1.0 course from: Applied Mathematics 1201A/B, ~~Applied Mathematics 1413~~, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, **Numerical and Mathematical**

Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, Computer Science 4442A/B, and Computer Science 4482A/B) require Mathematics 1600A/B as a pre-requisite.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21125>

SPECIALIZATION IN COMPUTER SCIENCE

Admission Requirements

Completion of first-year requirements, including the following courses with a mark of at least 60%:

0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B or Engineering Science 1036A/B (in each case with a mark of at least 65%);

0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);

1.0 course from: Applied Mathematics 1201A/B, ~~Applied Mathematics 1413~~, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.**

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, Computer Science 4442A/B, and Computer Science 4482A/B) require Mathematics 1600A/B as a pre-requisite.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21112>

MAJOR IN COMPUTER SCIENCE

Admission Requirements

Completion of first-year requirements, including the following courses with a mark of at least 60%:

0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B or Engineering Science 1036A/B (in each case with a mark of at least 65%);

0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);

1.0 course from: Applied Mathematics 1201A/B, ~~Applied Mathematics 1413~~, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.**

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, Computer Science 4442A/B, and Computer Science 4482A/B) require Mathematics 1600A/B as a pre-requisite.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21113>

MINOR IN COMPUTER SCIENCE

Admission Requirements

Completion of first-year requirements, including the following courses with a mark of at least 60%:

0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B or Engineering Science 1036A/B (in each case with a mark of at least 65%);

0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);

1.0 course from: Applied Mathematics 1201A/B, ~~Applied Mathematics 1413~~, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.**

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, Computer Science 4442A/B, and Computer Science 4482A/B) require Mathematics 1600A/B as a pre-requisite.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21124>

HONOURS SPECIALIZATION IN INFORMATION SYSTEMS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%, including:

Computer Science 1025A/B, Computer Science 1026A/B, or Engineering Science 1036A/B (in each case with a mark of at least 65%);

Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);

1.0 course from: Applied Mathematics 1201A/B, ~~Applied Mathematics 1413~~, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, **Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B**; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, Computer Science 4442A/B, and Computer Science 4482A/B) require Mathematics 1600A/B as a pre-requisite.

ITEM 11.2(c)(vi) – Faculty of Science, Department of Earth Sciences: Revisions to the Admission and Program Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission and program requirements for the modules offered by the Department of Earth Sciences in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Environmental Science
Specialization in Environmental Science
Major in Environmental Science
Minor in Environmental Science

Honours Specialization in Environmental Geoscience – For Professional Registration
Specialization in Environmental Geoscience – For Professional Registration

Honours Specialization in Geology – For Professional Registration
Specialization in Geology – For Professional Registration

Honours Specialization in Geophysics – For Professional Registration
Specialization in Geophysics – For Professional Registration
Major in Geophysics
Minor in Geophysics

Honours Specialization in Geology and Biology
Specialization in Geology and Biology

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Earth Sciences are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020. Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B.

The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B, 1202A/B, 1401A/B, and 1402A/B and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021. The Department of Earth Sciences will accept the algebra-based version of first-year Physics

(1101A/B and 1102A/B) for all of their modules with the exception of modules in Geophysics, where Physics 1201A/B and 1202A/B will be required.

The Admission Requirements for the Major in Geophysics will also be revised to remove Physics 1101A/B, which was designed for students that do not have the 12U calculus and vectors (MCV4U). However, the module also requires Calculus 1000A/B in Term 1 of Year 1, which lists MCV4U as a prerequisite. Hence, students pursuing this module should take Physics 1201A/B instead of Physics 1101A/B. In addition, the minimum 60% requirement was added for the principal courses to address an oversight.

Revisions to program requirements are also included for some modules due to the new first year courses in Numerical and Mathematical Methods.

ATTACHMENT:

[Revised Calendar Copy](#)

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=20729>

HONOURS SPECIALIZATION IN ENVIRONMENTAL SCIENCE

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.5 principal courses, with no mark in these principal courses below 60%, including:

1.0 course: Biology 1001A and Biology 1002B or Biology 1201A and Biology 1202B;

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B or the former Chemistry 1100A/B and the former Chemistry 1200B;

0.5 course from: Environmental Science 1021F/G; a 1000-level 0.5 course in Geography; Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B; **Physics 1101A/B, Physics 1102A/B, Physics 1201A/B, Physics 1202A/B, Physics 1028A/B, Physics 1029A/B, Physics 1301A/B, Physics 1302A/B, Physics 1401A/B, Physics 1402A/B, Physics 1501A/B, Physics 1502A/B, the former Physics 1028A/B, the former Physics 1029A/B, the former Physics 1301A/B, the former Physics 1302A/B;**

1.0 course from: Calculus 1000A/B or Calculus 1500A/B or **Numerical and Mathematical Methods 1412A/B or Mathematics 1225A/B;** Calculus 1301A/B or Calculus 1501A/B or **Numerical and Mathematical Methods 1414A/B;** ~~Mathematics 1225A/B,~~ Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B or **Numerical and Mathematical Methods 1411A/B;** ~~Statistical Sciences 1024A/B;~~ **Data Science 1000A/B;** Applied Mathematics 1201A/B; or the former ~~Calculus 1100A/B~~ **Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=20727>

SPECIALIZATION IN ENVIRONMENTAL SCIENCE

Admission Requirements

Completion of first-year requirements, with no mark in these principal courses below 60%, including:

1.0 course: Biology 1001A and Biology 1002B or Biology 1201A and Biology 1202B;

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B or the former Chemistry 1100A/B and the former Chemistry 1200B;

0.5 course from: Environmental Science 1021F/G; a 1000-level 0.5 course in Geography; Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B; **Physics 1101A/B, Physics 1102A/B, Physics 1201A/B, Physics 1202A/B, Physics 1028A/B, Physics 1029A/B, Physics 1301A/B, Physics 1302A/B, Physics 1401A/B, Physics 1402A/B, Physics 1501A/B, Physics 1502A/B, the former Physics 1028A/B, the former Physics 1029A/B, the former Physics 1301A/B, the former Physics 1302A/B;**.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B **or Numerical and Mathematical Methods 1412A/B or Mathematics 1225A/B;** Calculus 1301A/B or Calculus 1501A/B **or Numerical and Mathematical Methods 1414A/B;** ~~Mathematics 1225A/B,~~ Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B;** ~~Statistical Sciences 1024A/B;~~ **Data Science 1000A/B;** Applied Mathematics 1201A/B; **or the former Calculus 1100A/B Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=20726>

MAJOR IN ENVIRONMENTAL SCIENCE

Admission Requirements

Completion of first-year requirements, with no mark in these principal courses below 60%, including:

1.0 course: Biology 1001A and Biology 1002B or Biology 1201A and Biology 1202B;

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B **or the former Chemistry 1100A/B and the former Chemistry 1200B;**

0.5 course from: Environmental Science 1021F/G; a 1000-level 0.5 course in Geography; Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B; **Physics 1101A/B, Physics 1102A/B, Physics 1201A/B, Physics 1202A/B, Physics 1028A/B, Physics 1029A/B, Physics 1301A/B, Physics 1302A/B, Physics 1401A/B, Physics 1402A/B, Physics 1501A/B, Physics 1502A/B, the former Physics 1028A/B, the former Physics 1029A/B, the former Physics 1301A/B, the former Physics 1302A/B;**.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B **or Numerical and Mathematical Methods 1412A/B or Mathematics 1225A/B;** Calculus 1301A/B or Calculus 1501A/B **or Numerical and Mathematical Methods 1414A/B;** ~~Mathematics 1225A/B,~~ Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B;** ~~Statistical Sciences 1024A/B;~~ **Data Science 1000A/B;** Applied Mathematics 1201A/B; **or the former Calculus 1100A/B Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=20728>

MINOR IN ENVIRONMENTAL SCIENCE

Admission Requirements

Completion of first-year requirements, with no mark in these principal courses below 60%, including:

1.0 course: Biology 1001A and Biology 1002B or Biology 1201A and Biology 1202B;

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B or the former Chemistry 1100A/B and the former Chemistry 1200B;

0.5 course from: Environmental Science 1021F/G; a 1000-level 0.5 course in Geography; Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B; **Physics 1101A/B, Physics 1102A/B, Physics 1201A/B, Physics 1202A/B, Physics 1028A/B, Physics 1029A/B, Physics 1301A/B, Physics 1302A/B, Physics 1401A/B, Physics 1402A/B, Physics 1501A/B, Physics 1502A/B, the former Physics 1028A/B, the former Physics 1029A/B, the former Physics 1301A/B, the former Physics 1302A/B;**

1.0 course from: Calculus 1000A/B or Calculus 1500A/B or **Numerical and Mathematical Methods 1412A/B or Mathematics 1225A/B**, Calculus 1301A/B or Calculus 1501A/B or **Numerical and Mathematical Methods 1414A/B; Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B; Statistical Sciences 1024A/B; Data Science 1000A/B Applied Mathematics 1201A/B; or the former Calculus 1100A/B Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21638>

HONOURS SPECIALIZATION IN ENVIRONMENTAL GEOSCIENCE – For Professional Registration

Admission Requirements

Completion of Western's first year requirements with no failures and a minimum average of 70% in the following 3.0 principal courses with no mark below 60% in any principal course:

3.0 Principal Courses:

0.5 course: Chemistry 1301A/B.

0.5 course from: **Physics 1101A/B, Physics 1201A/B, Physics 1028A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1028A/B, the former Physics 1301A/B.**

1.0 course from: Chemistry 1302A/B, ~~any~~ one of (**Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1029A/B, the former Physics 1302A/B**), ~~any~~ one of (Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B).

0.5 course from: Calculus 1000A/B, Calculus 1500A/B, Mathematics 1225A/B, **Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B.**

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

*1.0 additional course from:

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

*This requirement should be completed by the end of **Year 2 the student's second year.**

Module

11.0 courses:

6.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2220A/B, Earth Sciences 2230A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 2265A/B, Earth Sciences 3340A/B, Earth Sciences 3350Y, Earth Sciences 4462A/B, Geography 2330A/B.

2.0 courses from: Earth Sciences 2266F/G, Earth Sciences 2281A/B, Earth Sciences 3320A/B, Earth Sciences 3341A/B, Earth Sciences 3370A/B, Earth Sciences 3372A/B, Earth Sciences 4431A/B, Earth Sciences 4432A/B, Earth Sciences 4440A/B, Earth Sciences 4450Y, Earth Sciences 4460A/B, Earth Sciences 4461A/B, Earth Sciences 4472A/B, Geography 2220A/B.

0.5 course from: Earth Sciences 3313A/B, Earth Sciences 3314A/B.

0.5 course from: Geography 3350A/B, Geography 3352A/B.

1.0 course: Earth Sciences 4490E.

1.0 additional course from (not already taken above):

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics

1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21639>

SPECIALIZATION IN ENVIRONMENTAL GEOSCIENCE – For Professional Registration

Admission Requirements

Completion of Western's first year requirements and no mark below 60% in any of the 3.0 principal course:

3.0 Principal Courses:

0.5 course: Chemistry 1301A/B.

0.5 course from: **Physics 1101A/B, Physics 1201A/B, Physics 1028A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1028A/B, the former Physics 1301A/B.**

1.0 course from: Chemistry 1302A/B, **any** one of (**Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1029A/B, the former Physics 1302A/B**), **any** one of (Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B).

0.5 course from: Calculus 1000A/B, Calculus 1500A/B, Mathematics 1225A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B.**

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

*1.0 additional course from:

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

*This requirement should be completed by the end of **Year 2** ~~the student's second year.~~

Module

10.0 courses:

6.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2220A/B, Earth Sciences 2230A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 2265A/B, Earth Sciences 3340A/B, Earth Sciences 3350Y, Earth Sciences 4462A/B, Geography 2330A/B.

2.0 courses from: Earth Sciences 2266F/G, Earth Sciences 2281A/B, Earth Sciences 3320A/B, Earth Sciences 3341A/B, Earth Sciences 3370A/B, Earth Sciences 3372A/B, Earth Sciences 4431A/B, Earth Sciences 4432A/B, Earth Sciences 4440A/B, Earth Sciences 4450Y, Earth Sciences 4460A/B, Earth Sciences 4461A/B, Earth Sciences 4472A/B, Geography 2220A/B.

0.5 course from: Earth Sciences 3313A/B, Earth Sciences 3314A/B.

0.5 course from: Geography 3350A/B, Geography 3352A/B.

1.0 additional course from (not already taken above):

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21640>

HONOURS SPECIALIZATION IN GEOLOGY - For Professional Registration

Admission Requirements

Completion of Western's first year requirements with no failures and a minimum average of 70% in the following 3.0 principal courses with no mark below 60% in any principal course:

3.0 Principal Courses:

0.5 course: Chemistry 1301A/B.

0.5 course from: **Physics 1101A/B, Physics 1201A/B, Physics 1028A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1028A/B, the former Physics 1301A/B.**

1.0 course from: Chemistry 1302A/B, **any** one of (**Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1029A/B, the former Physics 1302A/B**), **any** one of (Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B).

0.5 course from: Calculus 1000A/B, Calculus 1500A/B, Mathematics 1225A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B.**

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

*1.0 additional course from:

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

*This requirement should be completed by the end of **Year 2** ~~the student's second year.~~

Module

11.0 courses:

6.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2220A/B, Earth Sciences 2230A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 2265A/B, Earth Sciences 3313A/B, Earth Sciences 3314A/B, Earth Sciences 3315A/B, Earth Sciences 3350Y.

0.5 course from: Earth Sciences 4460A/B, Earth Sciences 4462A/B, Geography 2220A/B.

2.5 courses from: Earth Sciences 3310A/B, Earth Sciences 3321A/B, Earth Sciences 3340A/B, Earth Sciences 3341A/B, Earth Sciences 3370A/B, Earth Sciences 3372A/B, Earth Sciences 4431A/B, Earth Sciences 4432A/B, Earth Sciences 4440A/B, Earth Sciences 4450Y or Earth Sciences 4451Z, Earth Sciences 4472A/B.

1.0 course: Earth Sciences 4490E.

1.0 additional course from (not already taken above):

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21641>

SPECIALIZATION IN GEOLOGY – For Professional Registration

Admission Requirements

Completion of Western's first year requirements and no mark below 60% in any of the 3.0 principal courses:

3.0 Principal Courses:

0.5 course: Chemistry 1301A/B.

0.5 course from: **Physics 1101A/B, Physics 1201A/B, Physics 1028A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1028A/B, the former Physics 1301A/B.**

1.0 course from: Chemistry 1302A/B, **any** one of (**Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1029A/B, the former Physics 1302A/B**), **any** one of (Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B).

0.5 course from: Calculus 1000A/B, Calculus 1500A/B, Mathematics 1225A/B, **Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B.**

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

*1.0 additional course from:

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

*This requirement should be completed by the end of **Year 2 the student's second year.**

Module

10.0 courses:

6.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2220A/B, Earth Sciences 2230A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 2265A/B, Earth Sciences 3313A/B, Earth Sciences 3314A/B, Earth Sciences 3315A/B, Earth Sciences 3350Y.

0.5 course from: Earth Sciences 4460A/B, Earth Sciences 4462A/B, Geography 2220A/B.

2.5 courses from: Earth Sciences 3310A/B, Earth Sciences 3321A/B, Earth Sciences 3340A/B, Earth Sciences 3341A/B, Earth Sciences 3370A/B, Earth Sciences 3372A/B, Earth Sciences 4431A/B, Earth Sciences 4432A/B, Earth Sciences 4440A/B, Earth Sciences 4450Y or Earth Sciences 4451Z, Earth Sciences 4472A/B.

1.0 additional course from (not already taken above):

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Calculus 1301A/B **or Numerical and Mathematical Methods 1414A/B**, Calculus 1501A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B, Physics 1102A/B, Physics 1202A/B, Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, Statistical Sciences 1023A/B, Statistical Sciences 1024A/B, Data Science 1000A/B, Earth Sciences 2222A/B, Geography 2210A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, the former Physics 1029A/B, the former Physics 1302A/B, the former Statistical Sciences 1024A/B.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21643>

HONOURS SPECIALIZATION IN GEOPHYSICS – For Professional Registration

Admission Requirements

Completion of Western's first year requirements with no failures and a minimum average of 70% in the following 3.0 principal courses with no mark below 60% in any principal course:

3.0 Principal Courses:

0.5 course: Chemistry 1301A/B.

1.0 course from: (**Physics 1201A/B or Physics 1028A/B, Physics 1301A/B, Physics 1401A/B, or Physics 1501A/B or the former Physics 1028A/B or the former Physics 1301A/B**) and (**Physics 1202A/B or Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, or Physics 1502A/B or the former Physics 1029A/B or the former Physics 1302A/B**).

1.0 course from: (Calculus 1000A/B or Calculus 1500A/B **or Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B**) and (Calculus 1301A/B or Calculus 1501A/B **or Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1414A/B**); or **the former** Applied Mathematics 1413.

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

*1.0 additional course from:

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B**, Statistical Sciences 1023A/B, ~~Statistical Sciences 1024A/B~~, **Data Science 1000A/B**, Geography 2210A/B, **the former Statistical Sciences 1024A/B**.

*This requirement should be completed by the end of the student's second year.

Module

11.0 courses:

6.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2220A/B, Earth Sciences 2222A/B, Earth Sciences 2230A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 3320A/B, Earth Sciences 3321A/B, Earth Sciences 4420A/B, Earth Sciences 4423A/B.

1.0 course from: Earth Sciences 2123F/G, Earth Sciences 3340A/B, Earth Sciences 3372A/B, Earth Sciences 4421A/B, Earth Sciences 4432A/B, Earth Sciences 4440A/B, Earth Sciences 4462A/B, Earth Sciences 4472A/B, Geography 2220A/B, Geography 2330A/B.

0.5 course: Earth Sciences 4451Z.

0.5 course from: Calculus 2302A/B, Calculus 2502A/B.

1.0 course: Physics 2110A/B, Physics 2910F/G.

1.0 course: Earth Sciences 4490E.

1.0 additional course (not already taken above): Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B**, Statistical Sciences 1023A/B, ~~Statistical Sciences 1024A/B~~, **Data Science 1000A/B**, Geography 2210A/B, **the former Statistical Sciences 1024A/B**.

*This requirement should be completed by the end of **Year 2** ~~the student's second year~~.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21642>

SPECIALIZATION IN GEOPHYSICS – For Professional Registration

Admission Requirements

Completion of Western's first year requirements and no mark below 60% in any of the 3.0 principal courses:

3.0 Principal Courses:

0.5 course: Chemistry 1301A/B.

1.0 course from: (**Physics 1201A/B or Physics 1028A/B, Physics 1301A/B, Physics 1401A/B, or Physics 1501A/B or the former Physics 1028A/B or the former Physics 1301A/B**) and (**Physics 1202A/B or Physics 1029A/B, Physics 1302A/B, Physics 1402A/B, or Physics 1502A/B or the former Physics 1029A/B or the former Physics 1302A/B**).

1.0 course from: (Calculus 1000A/B or Calculus 1500A/B **or Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B**) and (Calculus 1301A/B or Calculus 1501A/B **or Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1414A/B**); or **the former Applied Mathematics 1413**.

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

*1.0 additional course from:

Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B**, Statistical Sciences 1023A/B, ~~Statistical Sciences 1024A/B,~~ **Data Science 1000A/B**, Geography 2210A/B, **the former Statistical Sciences 1024A/B**.

*This requirement should be completed by the end of **Year 2** ~~the student's second year~~.

Module

10.0 courses:

6.0 courses: Earth Sciences 2200A/B, Earth Sciences 2201A/B, Earth Sciences 2206A/B, Earth Sciences 2220A/B, Earth Sciences 2222A/B, Earth Sciences 2230A/B, Earth Sciences 2250Y, Earth Sciences 2260A/B, Earth Sciences 3320A/B, Earth Sciences 3321A/B, Earth Sciences 4420A/B, Earth Sciences 4423A/B.

1.0 course from: Earth Sciences 2123F/G, Earth Sciences 3340A/B, Earth Sciences 3372A/B, Earth Sciences 4421A/B, Earth Sciences 4432A/B, Earth Sciences 4440A/B, Earth Sciences 4462A/B, Earth Sciences 4472A/B, Geography 2220A/B, Geography 2330A/B.

0.5 course: Earth Sciences 4451Z.

0.5 course from: Calculus 2302A/B, Calculus 2502A/B.

1.0 course: Physics 2110A/B, Physics 2910F/G.

1.0 additional course (not already taken above): Applied Mathematics 1201A/B, Biology 1001A, Biology 1002B, Biology 1201A, Biology 1202B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B **or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B**, Statistical Sciences 1023A/B, ~~Statistical Sciences 1024A/B~~, **Data Science 1000A/B**, Geography 2210A/B, **the former Statistical Sciences 1024A/B**.

*This requirement should be completed by the end of **Year 2** ~~the student's second year~~.

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Approved by Senate in April 2021. Not yet published in Academic Calendar.

MAJOR IN GEOPHYSICS

Admission Requirements

Completion of first-year requirements including the following **principal** 2.5 courses **with no mark below 60% in any principal course**:

1.0 course from: (~~Physics 1101A/B~~, Physics 1201A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1028A/B or the former Physics 1301A/B) and (Physics 1202A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1029A/B or the former Physics 1302A/B).

1.0 course from: (Calculus 1000A/B, Calculus 1500A/B, **Numerical and Mathematical Methods 1412A/B** or **the former** Applied Mathematics 1412A/B) and (Calculus 1301A/B, Calculus 1501A/B, **Numerical and Mathematical Methods 1414A/B** or **the former** Applied Mathematics 1414A/B), each with a mark of at least 60%; or the former Applied Mathematics 1413 ~~with a mark of at least 60%~~.

0.5 course from: Earth Sciences 1022A/B, Earth Sciences 1023A/B, Earth Sciences 1070A/B, Earth Sciences 1081A/B, Earth Sciences 1083F/G.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21080>

MINOR IN GEOPHYSICS

Admission Requirements

Completion of first-year requirements, including 1.0 courses from: (Calculus 1000A/B, or Calculus 1500A/B or the former Calculus 1100A/B, **Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B**) and one of (Applied Mathematics 1201A/B, Applied Mathematics 1413, or Calculus 1301A/B, or Calculus 1501A/B, or **Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1414A/B**), each with a mark of at least 60%; or **the former Applied Mathematics 1413** with a mark of at least 60%.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21085>

HONOURS SPECIALIZATION IN GEOLOGY AND BIOLOGY

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with a minimum of 60% in each of the 3.0 principal courses taken, including:

Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B;

Chemistry 1301A/B and Chemistry 1302A/B or the former Chemistry 1100A/B and the former Chemistry 1200B;

Plus 1.0 additional course from: Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B, and one of Applied Mathematics 1201A/B, Calculus 1301A/B, or Calculus 1501A/B, Mathematics 1600A/B or the former Linear Algebra 1600A/B, **Data Science 1000A/B or the former** Statistical Sciences 1024A/B; or Mathematics 1225A/B and Mathematics 1229A/B. This requirement must be completed by the end of **Year 2** second year.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21089>

SPECIALIZATION IN GEOLOGY AND BIOLOGY

Admission Requirements

Completion of first-year requirements. Students must have a minimum of 60% in each of 3.0 principal courses taken, including:

Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B;

Chemistry 1301A/B and Chemistry 1302A/B ~~or the former Chemistry 1100A/B and the former Chemistry 1200B;~~

Plus 1.0 additional course from: Calculus 1000A/B, Calculus 1500A/B ~~or the former Calculus 1100A/B,~~ and one of Applied Mathematics 1201A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1600A/B ~~or the former Linear Algebra 1600A/B,~~ **Data Science 1000A/B or the former** Statistical Sciences 1024A/B; or Mathematics 1225A/B and Mathematics 1229A/B. This requirement must be completed by the end of **Year 2** ~~second year~~.

ITEM 11.2(c)(vii) – Faculty of Science, Department of Physics and Astronomy: Revisions to the Admission Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission requirements for the modules offered by the Department of Physics and Astronomy in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Astrophysics
Specialization in Astrophysics
Major in Astrophysics

Honours Specialization in Materials Science
Specialization in Materials Science
Major in Materials Science
Minor in Materials Science

Honours Specialization in Medical Physics
Specialization in Medical Physics
Major in Medical Physics

Honours Specialization in Physics
Specialization in Physics
Major in Physics
Minor in Physics

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Physics and Astronomy are being modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020. Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B.

The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B and 1202A/B, and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021.

The admission requirements for modules offered by the Department of Physics and Astronomy are being also being changed to allow the requirement of Mathematics 1600 to be substituted by Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B, facilitating entry into

Physics and Astronomy modules by students who are transferring to Science from Engineering or are pursuing concurrent degrees.

To make an easier transition for Engineering students, Chemistry 1302A/B has been added to the list of recommended courses for the 0.5 additional course from the Faculty of Science in admission requirements for the following modules. Engineering students would have taken Chemistry 1302A/B but not Chemistry 1301A/B.

- HONOURS SPECIALIZATION IN ASTROPHYSICS
- SPECIALIZATION IN ASTROPHYSICS
- HONOURS SPECIALIZATION IN MATERIALS SCIENCE
- SPECIALIZATION IN MATERIALS SCIENCE
- MAJOR IN MATERIALS SCIENCE
- MINOR IN MATERIALS SCIENCE
- HONOURS SPECIALIZATION IN MEDICAL PHYSICS
- SPECIALIZATION IN MEDICAL PHYSICS
- HONOURS SPECIALIZATION IN PHYSICS
- SPECIALIZATION IN PHYSICS

The changes to the admission requirements also reflect that the Faculty of Science will introduce Data Science 1000A/B and withdraw Statistical Sciences 1024A/B as of September 1, 2021.

ATTACHMENT:

[Revised Calendar Copy](#)

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21102>

HONOURS SPECIALIZATION IN ASTROPHYSICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.5 principal courses, with no mark in these principal courses below 60%:

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B** or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B)**. ; **or the former Physics 1026;**

1.0 course: **One of Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413;**

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

0.5 course: **Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B.** ~~or the former Linear Algebra 1600A/B;~~

0.5 additional course from the Faculty of Science. It is highly recommended that students complete one of the following: Chemistry 1301A/B, **Chemistry 1302A/B**, Computer Science 1025A/B or Computer Science 1026A/B, **Data Science 1000A/B** or **the former** Statistical Sciences **1024A/B;** .

0.5 additional course.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21108>

SPECIALIZATION IN ASTROPHYSICS

Admission Requirements

Completion of first-year requirements including the following 3.5 courses, each with a mark of at least 60%:

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B** or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B)**. ; **or the former Physics 1026;**

1.0 course: One of Calculus 1000A/B or Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413;

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

0.5 course: Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B. or the former Linear Algebra 1600A/B;

0.5 additional course from the Faculty of Science. It is highly recommended that students complete one of the following: Chemistry 1301A/B, Chemistry 1302A/B, Computer Science 1025A/B or Computer Science 1026A/B, Data Science 1000A/B or the former Statistical Sciences 1024A/B; .

0.5 additional course.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21092>

MAJOR IN ASTROPHYSICS

Admission Requirements

Completion of first-year requirements including the following 2.0 courses, each with a mark of at least 60%:

1.0 course from: (Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B). ; or the former Physics 1026

One of Calculus 1000A/B or Calculus 1500A/B or the former 1100A/B and one of Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

Students must complete Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B or the former Linear Algebra 1600A/B with a minimum mark of 55% by the end of ~~term one in year 2~~ **Term 1 in Year 2**.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21103>

HONOURS SPECIALIZATION IN MATERIALS SCIENCE

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%:

1.0 course from: (Physics 1201A/B, ~~Physics 1301A/B~~, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, ~~Physics 1302A/B~~, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B). ; or the former Physics 1026

Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1301A/B or Calculus 1501A/B; or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1301A/B or Calculus 1501A/B or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B; or the former Chemistry 1100A/B and the former Chemistry 1200B

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21110>

SPECIALIZATION IN MATERIALS SCIENCE

Admission Requirements

Completion of first-year requirements including the following 3.0 courses, each with a mark of at least 60%:

1.0 course from: (Physics 1201A/B, ~~Physics 1301A/B~~, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, ~~Physics 1302A/B~~, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B). ; or the former Physics 1026

Calculus 1000A/B or Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1301A/B or Calculus 1501A/B; or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1301A/B or Calculus 1501A/B or Numerical and Mathematical Methods 1414A/B); or the

former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B. ; or the former Chemistry 1100A/B and the former Chemistry 1200B

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21094>

MAJOR IN MATERIALS SCIENCE

Admission Requirements

Completion of first-year requirements with no failures including the following 3.0 courses, each with a mark of at least 60%:

1.0 course from: (Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B). ; or the former Physics 1026

Calculus 1000A/B or Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1301A/B or Calculus 1501A/B; or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1301A/B or Calculus 1501A/B or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B. ; or the former Chemistry 1100A/B and the former Chemistry 1200B

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21098>

MINOR IN MATERIALS SCIENCE

Admission Requirements

Completion of first-year requirements including the following 3.0 courses, each with a mark of at least 60%:

1.0 course from: (Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B). ; or the former Physics 1026

Calculus 1000A/B or Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1301A/B or Calculus 1501A/B; or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1301A/B or Calculus 1501A/B or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B; or the former Chemistry 1100A/B and the former Chemistry 1200B

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21104>

HONOURS SPECIALIZATION IN MEDICAL PHYSICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.5 principal courses, each with a mark of at least 60%

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B);**

1.0 course: One of Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413;

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

0.5 course: Mathematics 1600A/B or **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B.**

0.5 additional course from the Faculty of Science. It is highly recommended that students complete one of the following: Chemistry 1301A/B, **Chemistry 1302A/B**, Computer Science 1025A/B or Computer Science 1026A/B, **Data Science 1000A/B** or **the former** Statistical Science 1024A/B;.

0.5 additional course.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21109>

SPECIALIZATION IN MEDICAL PHYSICS

Admission Requirements

Completion of first-year requirements including the following 3.5 courses, each with a mark of at least 60%:

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B** or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B).**

1.0 course from: **Calculus 1000A/B or Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413;**

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

0.5 course: **Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B.**

0.5 additional course from the Faculty of Science. It is highly recommended that students complete one of the following: **Chemistry 1301A/B, Chemistry 1302A/B, Computer Science 1025A/B or Computer Science 1026A/B, Data Science 1000A/B or the former Statistical Science 1024A/B.**

0.5 additional course.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21093>

MAJOR IN MEDICAL PHYSICS

Admission Requirements

Completion of first-year requirements including the following 2.0 courses, each with a mark of at least 60%:

1.0 course from: (Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B).**

One of Calculus 1000A/B or Calculus 1500A/B or the former Calculus 1100A/B and one of Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

Students must complete Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B with a minimum mark of 55% by the end of ~~term one in year 2~~ **Term 1 in Year 2.**

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21105>

HONOURS SPECIALIZATION IN PHYSICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.5 principal courses, with no mark in these principal courses below 60%:

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B** or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B).** ~~; or the former Physics 1026;~~

1.0 course: One of Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

0.5 course: Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B. ~~or the former Linear Algebra 1600A/B~~

0.5 additional course from the Faculty of Science. It is highly recommended that students complete one of the following: Chemistry 1301A/B, **Chemistry 1302A/B**, Computer Science 1025A/B or Computer Science 1026A/B, **Data Science 1000A/B** or **the former** Statistical Science 1024A/B; ~~.~~

0.5 additional course.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21107>

SPECIALIZATION IN PHYSICS

Admission Requirements

Completion of first-year requirements including the following 3.5 courses, each with a mark of at least 60%:

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B** or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B)**.
; or the former **Physics 1026**

1.0 course: One of **Calculus 1000A/B, Calculus 1500A/B** or the former **Calculus 1100A/B** and **Calculus 1501A/B** (recommended) or **Calculus 1301A/B** (with a mark of at least 85%); or **Applied Mathematics 1413**

1.0 course: **(Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B)** and **(Calculus 1501A/B** (recommended) or **Calculus 1301A/B** with a minimum mark of 85% or **Numerical and Mathematical Methods 1414A/B)**; or the former **Applied Mathematics 1413** or the former **Applied Mathematics 1412A/B** and the former **Applied Mathematics 1414A/B**.

0.5 course: **Mathematics 1600A/B** or **Numerical and Mathematical Methods 1411A/B** or the former **Applied Mathematics 1411A/B** or the former **Linear Algebra 1600A/B**.

0.5 additional course from the Faculty of Science. It is highly recommended that students complete one of the following: **Chemistry 1301A/B, Chemistry 1302A/B, Computer Science 1025A/B** or **Computer Science 1026A/B, Data Science 1000A/B** or **the former Statistical Sciences 1024A/B**;

0.5 additional course.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21091>

MAJOR IN PHYSICS

Admission Requirements

Completion of first-year requirements including the following courses, each with a mark of at least 60%:

1.0 course from: **(Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B** or 80% in **the former Physics 1028A/B)** and **(Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B** or 80% in **the former Physics 1029A/B)**.
; or the former **Physics 1026**

1.0 course from: Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

1.0 additional course, at least 0.5 of which must be from the Faculty of Science.

Students must complete Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B or the former Linear Algebra 1600A/B with a minimum mark of 55% by the end of Term 1 in Year 2.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21096>

MINOR IN PHYSICS

Admission Requirements

Completion of first-year requirements including the following courses, each with a mark of at least 60%:

1.0 course from: (Physics 1201A/B, Physics 1301A/B, Physics 1401A/B, Physics 1501A/B, the former Physics 1301A/B or 80% in the former Physics 1028A/B) and (Physics 1202A/B, Physics 1302A/B, Physics 1402A/B, Physics 1502A/B, the former Physics 1302A/B or 80% in the former Physics 1029A/B). ; or the former Physics 1026

1.0 course from: Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B and Calculus 1501A/B (recommended) or Calculus 1301A/B (with a mark of at least 85%); or Applied Mathematics 1413

1.0 course: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B) and (Calculus 1501A/B (recommended) or Calculus 1301A/B with a minimum mark of 85% or Numerical and Mathematical Methods 1414A/B); or the former Applied Mathematics 1413 or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B.

1.0 additional course, at least 0.5 of which must be from the Faculty of Science.

Students must complete Mathematics 1600A/B or Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B or the former Linear Algebra 1600A/B with a minimum mark of 55% by the end of Term 1 in Year 2.

ITEM 11.2(c)(viii) – Faculty of Science, Department of Statistical and Actuarial Sciences: Revisions to the Admission and Program Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission and program requirements for the modules offered by the Department of Statistical and Actuarial Sciences in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Actuarial Science
Major in Actuarial Science

Honours Specialization in Data Science
Major in Data Science
Minor in Data Science

Honours Specialization in Financial Modelling
Major in Financial Modelling
Minor in Applied Financial Modelling

Honours Specialization in Statistics
Major in Applied Statistics
Minor in Applied Statistics

EXECUTIVE SUMMARY:

The admission requirements for modules offered by the Department of Statistical and Actuarial Sciences are being modified to reflect changes in the first-year course offerings of Applied Mathematics.

The Department of Applied Mathematics introduced Applied Mathematics 1412A/B and 1414A/B to replace Applied Mathematics 1413 (which has been withdrawn) as of September 1, 2020. Effective September 1, 2021, a new subject area, Numerical and Mathematical Methods, is being created for the Applied Mathematics courses being transferred to the Department of Physics and Astronomy as a result of the dissolution of the Department of Applied Mathematics. The new subject area is being created to avoid confusion with Mathematics and Applied Mathematics courses offered by the Department of Mathematics. Applied Mathematics 1411A/B, 1412A/B and 1414A/B are renamed respectively as Numerical and Mathematical Methods 1411A/B, 1412A/B and 1414A/B. The Faculty of Science will introduce Data Science 1000A/B and withdraw Statistical Sciences 1024A/B as of September 1, 2021.

The module requirements for the Honours Specialization in Financial Modelling will be revised to reflect that Applied Mathematics 3611F/G will be withdrawn effective September 1, 2021. The course material of Applied Mathematics 3611F/G will be covered in other courses such as the new Data Science 3000A/B and Statistical Sciences 4864A/B, and so it is no longer needed.

ATTACHMENT:

[Revised Calendar Copy](#)

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21053>

HONOURS SPECIALIZATION IN ACTUARIAL SCIENCE

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including: (Calculus 1000A/B or Calculus 1500A/B) and (Calculus 1501A/B or (Calculus 1301A/B with a mark of at least 85%)), Mathematics 1600A/B, Economics 1021A/B and Economics 1022A/B, plus 0.5 additional principal course, with no mark less than 60% in any of the 3.0 principal courses.

Recommended (but not required) first year courses: Actuarial Science 1021A/B, Business Administration 1220E, Philosophy 1200.

Please note: **Note:** Economics 1021A/B and Economics 1022A/B, if not taken in first year, must be completed in one of the upper years in the program.

Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413 may be substituted for **the 1.0 Calculus course** requirement. **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B** may be substituted for Mathematics 1600A/B. Mathematics 1600A/B (or ~~Applied Mathematics~~ **Numerical and Mathematical Methods 1411A/B**), if not taken in the first year, must be completed prior to the second term of **Year 2** ~~second year~~.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21050>

MAJOR IN ACTUARIAL SCIENCE

Admission Requirements

Completion of first-year requirements, including the following:

(Calculus 1000A/B or Calculus 1500A/B) and (Calculus 1501A/B or (Calculus 1301A/B with a mark of at least 85%)), Mathematics 1600A/B, Economics 1021A/B and Economics 1022A/B, plus 0.5 other principal course with no mark less than 60% in any of the 3.0 principal courses.

Recommended (but not required) first year courses: Actuarial Science 1021A/B, Business Administration 1220E, Philosophy 1200.

Please note: **Note:** Economics 1021A/B and Economics 1022A/B, if not taken in first year, must be completed in one of the upper years in the program.

Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the

former Applied Mathematics 1413 may be substituted for **the 1.0** Calculus **course** requirement. **Numerical and Mathematical Methods 1411A/B or the former** Applied Mathematics 1411A/B may be substituted for Mathematics 1600A/B. Mathematics 1600A/B (or ~~Applied Mathematics~~ **Numerical and Mathematical Methods 1411A/B**), if not taken in the first year, must be completed prior to the second term of **Year 2** ~~second year~~.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21056>

HONOURS SPECIALIZATION IN DATA SCIENCE

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including (Calculus 1000A/B or Calculus 1500A/B) and (Calculus 1501A/B or (Calculus 1301A/B with a mark of at least 85%)), Mathematics 1600A/B, Computer Science 1026A/B (with a mark of at least 65%), Computer Science 1027A/B (with a mark of at least 65%) plus 0.5 additional principal courses, with no mark less than 60% in any of the 3.0 principal courses.

Recommended course: Statistical Sciences 1023A/B.

~~Please note:~~ **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former** Applied Mathematics 1413 may be substituted for the 1.0 Calculus **course** requirement. **Numerical and Mathematical Methods 1411A/B or the former** Applied Mathematics 1411A/B may be substituted for Mathematics 1600A/B. If not taken in the first year, Mathematics 1600A/B or ~~Applied Mathematics~~ **Numerical and Mathematical Methods 1411A/B** must be completed prior to the second term of **Year 2** ~~second year~~.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21057>

MAJOR IN DATA SCIENCE

Admission Requirements

Completion of first-year requirements, including the following:

Calculus 1000A/B or Calculus 1500A/B plus Calculus 1501A/B (or Calculus 1301A/B with a mark of at least 85%); Mathematics 1600A/B, Computer Science 1026A/B (with a mark of at least 65%), Computer Science 1027A/B (with a mark of at least 65%) plus 0.5 additional principal courses, with no mark less than 60% in any of the 3.0 principal courses. Recommended (but not required) first-year courses: **Data Science 1000A/B** ~~Statistical Sciences 1024A/B~~ and/or Statistical Sciences 1023A/B; **or the former Statistical Sciences 1024A/B**.

~~Please note:~~ **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former** Applied Mathematics 1413 may be substituted for **the 1.0** Calculus **course**

requirement. **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B** may be substituted for Mathematics 1600A/B. If not taken in the first year, Mathematics 1600A/B or **Applied Mathematics Numerical and Mathematical Methods 1411A/B** must be completed prior to the second term of **Year 2 second year**.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21604>

MINOR IN DATA SCIENCE

Admission Requirements

Completion of first-year requirements, including the following with no mark less than 60% in any of these courses: Calculus 1000A/B or Calculus 1500A/B, Calculus 1501A/B (or Calculus 1301A/B with a mark of at least 85%); Mathematics 1600A/B or Applied Mathematics 1411A/B, Computer Science 1026A/B (with a mark of at least 65%), Computer Science 1027A/B (with a mark of at least 65%).

Recommended (but not required) first-year courses: **Data Science 1000A/B** ~~Statistical Sciences 1024A/B~~ and/or Statistical Sciences 1023A/B; **or the former Statistical Sciences 1024A/B**.

~~Please note:~~ **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413** may be substituted for **the 1.0 Calculus course** requirement. **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B** may be substituted for Mathematics 1600A/B. If not taken in the first year, Mathematics 1600A/B or **Applied Mathematics Numerical and Mathematical Methods 1411A/B** must be completed prior to the second term of **Year 2 second year**.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21054>

HONOURS SPECIALIZATION IN FINANCIAL MODELLING

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including: (Calculus 1000A/B or Calculus 1500A/B) and (Calculus 1501A/B or (Calculus 1301A/B with a mark of at least 85%)), plus 2.0 additional principal courses, with no mark less than 60% in any of the 3.0 principal courses.

Mathematics 1600A/B **or Applied Mathematics 1411A/B** with a mark of at least 60% **for either, is normally taken in Year 1**. If not taken in Year 1, it must be completed **in the first prior to the second** term of Year 2.

Recommended (but not required) first year courses: Economics 1021A/B and Economics 1022A/B, Philosophy 1200, Computer Science 1026A/B and/or Computer Science 1027A/B.

~~Please note:~~ **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413 may be substituted for the 1.0 Calculus course requirement. Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B may be substituted for Mathematics 1600A/B.**

Module

9.5 courses:

3.5 courses: Statistical Sciences 2503A/B (or the former Applied Mathematics 2503A/B), Statistical Sciences 2857A/B, Statistical Sciences 2858A/B, Statistical Sciences 2864A/B, Statistical Sciences 3657A/B, Statistical Sciences 3858A/B, Statistical Sciences 4861A/B ~~(or the former Statistical Sciences 3861A/B).~~

0.5 courses: Actuarial Science 2553A/B.

3.0 courses: Financial Modelling 2555A/B (or the former Actuarial Science 2555A/B), Financial Modelling 2557A/B (or the former Actuarial Science 2557A/B), Financial Modelling 3520A/B (or the former Statistical Sciences 3520A/B), Financial Modelling 3613A/B (or the former Applied Mathematics 3613A/B), Financial Modelling 3817A/B* ~~(or the former Applied Mathematics 3817A/B)~~, Financial Modelling 4521A/B (or the former Statistical Sciences 4521F/G).

2.0 courses: Calculus 2402A/B, Applied Mathematics 2811B, Applied Mathematics 2814F/G, Applied Mathematics 3815A/B, the former Applied Mathematics 2813B.

0.5 courses from: ~~Applied Mathematics 3611F/G (or the former Applied Mathematics 4611F/G)~~, Applied Mathematics 4613A/B** or Applied Mathematics 4617A/B*, Applied Mathematics 4999Z, **Data Science 3000A/B**, Financial Modelling 4998F/G/Z ~~(or the former Statistical Sciences 4998F/G/Z)~~, **Statistical Sciences 4864A/B**, Statistical Sciences 4960F/G, Statistical Sciences 4999F/G/Z, or Actuarial Science 4997F/G/Z; **the former Applied Mathematics 3611F/G.**

Calculus 2402A/B may be replaced by either (Calculus 2502A/B and Calculus 2503A/B) or (Calculus 2502A/B and Mathematics 2122A/B or the former Mathematics 2123A/B). When such a replacement occurs, the module will include 10.0 courses.

* May be offered only in odd-numbered academic years.

** May be offered only in even-numbered academic years.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21051>

MAJOR IN FINANCIAL MODELLING

Admission Requirements

Completion of first-year requirements, including the following:

(Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B) and (Calculus 1501A/B or (Calculus 1301A/B with a mark of at least 85%)), plus 2.0 other principal courses with no mark less than 60% in any of the 3.0 principal courses.

Mathematics 1600A/B or the former Linear Algebra 1600A/B or Applied Mathematics 1411A/B with a minimum mark of 60% for either, is normally taken in year 1. If not taken in year Year 1, it must be completed in the first prior to the second term of year Year 2.

Recommended (but not required) first year courses: Economics 1021A/B and Economics 1022A/B, Philosophy 1200, Computer Science 1026A/B.

Please note: Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413 may be substituted for the 1.0 Calculus course requirement. Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B may be substituted for Mathematics 1600A/B.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21606>

MINOR IN APPLIED FINANCIAL MODELLING

Admission Requirements

Completion of first-year requirements, including the following with no mark less than 60% in any of these courses: Calculus 1000A/B or Calculus 1500A/B; Calculus 1501A/B (or Calculus 1301A/B with a mark of at least 85%); Mathematics 1600A/B or Applied Mathematics 1411A/B.

Recommended (but not required) first year courses: Economics 1021A/B and Economics 1022A/B, Philosophy 1200, Computer Science 1026A/B.

Please note: Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413 may be substituted for the 1.0 Calculus course requirement. Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B may be substituted for Mathematics 1600A/B. If not taken in Year 1 the first year, Mathematics 1600A/B or Applied Mathematics 1411A/B must be completed prior to the second term of Year 2 second year.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21055>

HONOURS SPECIALIZATION IN STATISTICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including (Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B) and (Calculus 1501A/B or (Calculus 1301A/B with a mark of at least 85%)), Mathematics 1600A/B **or the former Linear Algebra 1600A/B**, plus 1.5 additional principal courses, with no mark less than 60% in any of the 3.0 principal courses.

Recommended course: Statistical Sciences 1023A/B.

Please note: **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413** may be substituted for the 1.0 Calculus **course** requirement. **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B** may be substituted for Mathematics 1600A/B. **Mathematics 1600A/B or the former Linear Algebra 1600A/B (or Applied Mathematics 1411A/B), if** not taken in **Year 1** the first year, **Mathematics 1600A/B** must be completed prior to the second term of **Year 2** second year.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21052>

MAJOR IN APPLIED STATISTICS

Admission Requirements

Completion of first-year requirements, including the following:

Calculus 1000A/B or Calculus 1500A/B plus Calculus 1501A/B (or Calculus 1301A/B with a mark of at least 85%); Mathematics 1600A/B; 1.0 course from Psychology 1000, Biology 1001A or Biology 1201A, Biology 1002B or Biology 1202B, Sociology 1020; plus 0.5 other principal course, with no mark less than 60% in any of the 3.0 principal courses.

Recommended (but not required) first-year courses: **Data Science 1000A/B** **Statistical Sciences 1024A/B** and/or **Statistical Sciences 1023A/B; or the former Statistical Sciences 1024A/B.**

Please note: **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413** may be substituted for **the 1.0 Calculus course** requirements. **Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B** may be substituted for Mathematics 1600A/B. **Mathematics 1600A/B or the former Linear Algebra 1600A/B (or Applied Mathematics 1411A/B), if** not taken in **Year 1** the first year, **Mathematics 1600A/B** must be completed prior to the second term of **Year 2** second year.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21605>

MINOR IN APPLIED STATISTICS

Admission Requirements

Completion of first-year requirements, including the following with no mark less than 60% in any of these courses: Calculus 1000A/B or Calculus 1500A/B, Calculus 1501A/B (or Calculus 1301A/B with a mark of at least 85%); Mathematics 1600A/B ~~or Applied Mathematics 1411A/B~~, Computer Science 1026A/B (with a mark of at least 65%), Computer Science 1027A/B (with a mark of at least 65%).

Recommended (but not required) first-year courses: **Data Science 1000A/B** ~~Statistical Sciences 1024A/B~~ and/or ~~Statistical Sciences 1023A/B~~; **or the former Statistical Sciences 1024A/B**.

~~Please note:~~ **Note: Numerical and Mathematical Methods 1412A/B and Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413 may be substituted for the 1.0 Calculus course requirements. Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B may be substituted for Mathematics 1600A/B.** If not taken in **Year 1** ~~the first year~~, **Mathematics 1600A/B** must be completed prior to the second term of **Year 2** ~~second year~~.

ITEM 11.2(c)(ix) – Faculty of Science: Revisions to the Admission Requirements for Modules offered in Integrated Science

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the admission requirements for the modules offered in Integrated Science in the Faculty of Science (listed below) be revised as shown.

Honours Specialization in Integrated Science with Astrophysics
Honours Specialization in Integrated Science with Biology
Honours Specialization in Integrated Science with Chemistry
Honours Specialization in Integrated Science with Computer Science
Honours Specialization in Integrated Science with Earth Sciences
Honours Specialization in Integrated Science with Environmental Science
Honours Specialization in Integrated Science with Genetics
Honours Specialization in Integrated Science with Mathematical and Statistical Sciences
Honours Specialization in Integrated Science with Physics

EXECUTIVE SUMMARY:

The admission requirements for modules offered in Integrated Science are being modified to reflect changes in the first-year course offerings of Physics and Astronomy. The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B and 1202A/B, and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021.

This proposal also adds two paragraphs about the Integrated Science program to the Honours Specialization in Integrated Science with Astrophysics. These two paragraphs appear in all other Integrated Science modules.

ATTACHMENT:

[Revised Calendar Copy](#)

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21636>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH ASTROPHYSICS

The Western Integrated Science (WISc) program is a first entry, four-year program administered by the Faculty of Science. It is designed to provide select students with the diverse science education necessary to address the interdisciplinarity of today's major scientific challenges (e.g., climate change, world hunger, alternative energy). WISC combines unique Integrated Science courses with traditional discipline-specific courses. In Year 2, WISC students will enroll in an Integrated Science Honours Specialization module administered jointly by the Faculty of Science and individual Science departments.

Admission Requirements

Admission into WISc is competitive, limited and open only to students who apply to Western through the ES stream of the Ontario Universities' Application Centre. In addition to the Grade 12 requirements, a personal statement is required and will be used as part of the adjudication for admission. See the Western Faculty of Science website (http://www.uwo.ca/sci/undergrad/future_students/index.html) for details about the admission selection process.

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

2.0 course: Integrated Science 1001X;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B.~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

0.5 course: Mathematics 1600A/B*.

*Students must complete Mathematics 1600A/B by the end of Term 1 in Year 2.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21535>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH BIOLOGY

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

0.5 course: Biology 1001A;

2.0 course: Integrated Science 1001X.

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<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21536>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH CHEMISTRY

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

2.0 course: Integrated Science 1001X.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21537>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH COMPUTER SCIENCE

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

2.0 course: Integrated Science 1001X.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21538>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH EARTH SCIENCES

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

2.0 course: Integrated Science 1001X.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21539>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH ENVIRONMENTAL SCIENCE

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

0.5 course: Biology 1001A;

2.0 courses: Integrated Science 1001X.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21540>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH GENETICS

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

0.5 course: Biology 1001A;

2.0 course: Integrated Science 1001X.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21541>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH MATHEMATICAL AND STATISTICAL SCIENCES

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

2.0 course: Integrated Science 1001X;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

0.5 course: Mathematics 1600A/B.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21542>

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH PHYSICS

Admission Requirements

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: Integrated Science 1000Z;

2.0 course: Integrated Science 1001X;

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

~~1.0 course: Chemistry 1301A/B, Physics 1301A/B or Physics 1501A/B;~~

0.5 course: Chemistry 1301A/B;

0.5 course: Physics 1201A/B or Physics 1501A/B or the former Physics 1301A/B;

0.5 course: Mathematics 1600A/B*.

Students must complete Mathematics 1600A/B by the end of Term 1 in Year 2.

ITEM 11.2(c)(x) – Faculty of Science: Transfer of Modules from the Department of Applied Mathematics to the Department of Mathematics and the Department of Physics and Astronomy

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

EXECUTIVE SUMMARY:

The Board of Governors approved that the Department of Applied Mathematics be dissolved and its members welcomed into the Departments of Mathematics and Physics and Astronomy effective July 1, 2021.

Due to the dissolution of the Department of Applied Mathematics, effective July 1, 2021, administration of the following six modules will move to the Department of Mathematics:

HONOURS SPECIALIZATION IN APPLIED MATHEMATICS
SPECIALIZATION IN APPLIED MATHEMATICS
HONOURS SPECIALIZATION IN MATHEMATICAL AND STATISTICAL SCIENCES
MAJOR IN APPLIED MATHEMATICAL METHODS
MAJOR IN APPLIED MATHEMATICS
MINOR IN APPLIED MATHEMATICS

Further, due to the dissolution of the Department of Applied Mathematics, effective July 1, 2021, administration of the following module will move to the Department of Physics and Astronomy:

MAJOR IN SCIENTIFIC COMPUTING AND NUMERICAL METHODS

ITEM 11.2(d)(i) – Faculty of Social Science: Introduction of a Social Science Internship Program and Internship Courses

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, a Social Science Internship Program (SSIP) be introduced in the Faculty of Social Science, and

That Social Science 3990A/B/Y (Internship) be revised as shown, and

That the following courses be introduced in the Faculty of Social Science:

Social Science 3994 (Internship: Preparation and Skill Development)
Social Science 3995A/B/Y (Internship: Preparation and Skill Development)
Social Science 3391 (Internship)
Social Science 3392 (Internship)
Social Science 3993 (Internship)

EXECUTIVE SUMMARY:

The Faculty of Social Science wishes to introduce an internship program that will provide short-term (4 month) and long-term (8-16 month) work terms for students in all Departments within the Faculty of Social Science.

The DAN Department of Management & Organizational Studies has offered a long-term (8-16 month) internship program since 2002-03. More recently, the Faculty of Social Science has offered a short-term (4-month) internship option for students enrolled in an Honours Specialization, Specialization or Major. Students in departments other than the DAN Department of Management & Organizational Studies have not had access to long-term (8-16 month) internships.

The proposed Social Science Internship Program (SSIP) will offer short-term (4 month) and long-term (8-16 month) internship opportunities to students in all departments. The program will support more equitable and flexible access to work-integrated learning and contribute to the Faculty's goal of increased student engagement in work-integrated learning. This new program will complement the existing long-term (8-16 month) internship program in the DAN Department of Management & Organizational Studies, which will continue to be offered. It will also mirror similar long-term programs offered within the Faculties of Engineering, Science, and Health Sciences.

The Social Science Internship Program will include preparatory workshops, a competitive internship application process, and completion of a reflection assignment and presentation. The program will be identified on a student's transcript record to acknowledge enrollment in a short-term (4-month) or long-term (8-16 month) internship. The short-term (4 month) internship will be available to students in 15.0-credit and 20.0-credit degree programs. The long-term internship will be restricted to students completing a 20.0-credit degree program. Importantly, the introduction of SSIP will create access for international students, who are currently ineligible for paid academic internship based on current Immigration, Refugees and Citizenship Canada co-op work permit regulations.

At present, students enrolled in the existing short-term internship course (Social Science 3990A/B/Y) are charged 0.5 credit tuition fee and a \$125 administrative fee to participate in the course. In the long-term internship programs available to students in DAN MOS, Engineering, and Science, the 1.0 credit-bearing course is applied to the student's previous year of study and an internship fee is charged based on the internship length. In consultation with the Office of the Registrar, the Faculty of Social Science is seeking to apply this approach to short-term internship, where the 0.5 credit-bearing course will be applied to the student's previous year of study and a 0.0 work term course and internship fee are applied for the 4 month term that a students is in an internship. This will allow for a consistent fee structure for students in short-term (4 month) and long-term (8-16 month) internships.

ATTACHMENTS:

[New Calendar Copy – Social Science Internship Program](#)

Calendar Copy for Courses

- [Social Science 3394 Internship: Preparation and Skill Development \(New\)](#)
- [Social Science 3995A/B/Y Internship: Preparation and Skill Development \(New\)](#)
- [Social Science 3990A/B/Y Internship \(Revision to existing course\)](#)
- [Social Science 3991 Internship \(New\)](#)
- [Social Science 3392 Internship \(New\)](#)
- [Social Science 3393 Internship \(New\)](#)

[Social Science Internship Program Course Summary](#)

NEW CALENDAR COPY

SOCIAL SCIENCE INTERNSHIP PROGRAM

Admission Requirements

The Social Science Internship Program (SSIP) aims to provide 4 – 16-month practical degree-related experience in a paid, employment setting. All students enrolled in an Honours Specialization, Specialization or Major in the Faculty of Social Science at Western University are eligible to enroll in the Social Science Internship Program.

Students must also satisfy the eligibility requirements which are to: (i) have at least a 70% average on their previous 5.0 courses; (ii) have completed at least 5.0 credits at Western University; and (iii) be in good standing with their Department or program module as appropriate.

Students interested in the Social Science Internship Program should apply through Western Connect (<http://connect.uwo.ca>). Students enrolled in a 15.0-credit or 20.0-credit degree program may apply for short-term (4 month) internship in the fall term of their second, third or fourth year of study. Students enrolled in a 20.0-credit degree program may apply for long-term (8-16 month) internship in the fall term of their third year of study. Additional opportunities may include an internship work term between years four and five of an eligible academic program, or between years one and year two of a second degree.

Students who meet the academic eligibility criteria will be required to attend preparatory workshops and meet other requirements included in Social Science 3995A/B/Y and Social Science 3994 prior to their work term. Students who are successful in securing a short-term (4 month) internship will pay an internship fee and receive 0.5 credit for Social Science 3995A/B/Y upon successful completion of the work term. Students who are successful in securing a long-term (8-16 month) internship will pay an internship fee and receive 1.0 credit for Social Science 3994 upon successful completion of the work term. Students who are not successful in securing an internship will be withdrawn from Social Science 3995A/B/Y or Social Science 3994 without academic penalty and will not be liable for the administrative fee.

During their work term, students will be registered in one of four courses depending on the length of the internship:

- Social Science 3990A/B/Y – Internship: Work Term (4 month)
- Social Science 3991 - Internship: Work Term (8 month)
- Social Science 3992 - Internship: Work Term (9-12 month)
- Social Science 3993 - Internship: Work Term (13-16 month)

International students who meet the requirements to participate in the themed program must secure a valid [co-op work permit](#) regardless of the timing and length of the internship.

Following the work term, students will complete a final assignment and presentation. A grade of pass/fail will be assigned to each of the course components completed as part of the themed program.

Students who qualify to receive a continuing scholarship in the academic year in which they participate in the Social Science Internship Program are permitted to defer receipt of the scholarship for one year.

Students may not take any academic courses during the internship work term courses, unless granted special permission by the Associate Dean (Undergraduate), Faculty of Social Science. Only those students with a cumulative average of at least 75% should apply for special permission.

For additional information, please visit <https://www.ssc.uwo.ca/undergraduate/InternshipsSocialScience/InternshipInformationStudents/index.html>.

NEW CALENDAR COPY

Social Science 3994 Internship: Preparation and Skill Development

A series of workshops to prepare students for a practical professional learning experience. After enrolling in the course, students apply and may be selected for an 8-16-month supervised work term with an employer as approved by the Faculty of Social Science. Following the work term, students are required to submit a final assignment and presentation on the work performed.

Prerequisite(s): Permission of the Faculty of Social Science. Applicants must have an average of at least 70% in the most recent 5.0 credits completed and be enrolled in a Social Science Honours Specialization, Specialization or Major and be registered in their third year of a 20.0 credit degree program.

Extra Information: Pass/Fail. Credit for this course will not be given unless a minimum 8-month internship and all other mandatory components have been completed. This course may not be used as a substitute for any other course in the Faculty of Social Science. On successful completion, credit for the course will be given in the year in which initial registration in the course took place which is usually in Year 3.

Note: 1) International students should consult the Experiential Learning Coordinator, Social Science about their eligibility. 2) Students may not take any academic courses during their internship work term course (Social Science 3991, Social Science 3992, or Social Science 3993).

COURSE WEIGHT: 1.00
BREADTH: CATEGORY A
SUBJECT CODE: SOCIAL SCIENCE

NEW CALENDAR COPY

Social Science 3995A/B/Y Internship: Preparation and Skill Development

A series of workshops to prepare students for a practical professional learning experience. After enrolling in the course, students apply and may be selected for a 4-month supervised work term with an employer as approved by the Faculty of Social Science. Following the work term, students must complete a final assignment and presentation on the work performed.

Prerequisite(s): Permission of the Faculty of Social Science. Applicants must have an average of at least 70% in the most recent 5.0 credits completed and be enrolled in a Social Science Honours Specialization, Specialization or Major module and be registered in third or fourth year of a 15.0 credit or 20.0 credit degree program.

Extra Information: Pass/Fail. Credit for this course will not be given unless an internship and all other mandatory components have been completed. This course may not be used as a substitute for any other course in the Faculty of Social Science. On successful completion, credit for the course will be given in the year in which initial registration in the course took place.

Note: 1) International students should consult the Experiential Learning Coordinator, Social Science about their eligibility. 2) Students may not take any academic courses during their internship work term course (Social Science 3990A/B/Y).

COURSE WEIGHT: 0.50
BREADTH: CATEGORY A
SUBJECT CODE: SOCIAL SCIENCE

REVISED CALENDAR COPY

https://www.westerncalendar.uwo.ca/Courses.cfm?CourseAcadCalendarID=MAIN_024482_1

Social Science 3990A/B/Y Internship Work Term

Provides students with a 4-month supervised work term approved by the Faculty of Social Science. Students are required to submit a final assignment and presentation on the work performed.

Co-requisite and Prerequisite(s): Registration in Social Science 3995A/B/Y. Permission of the Faculty of Social Science. Applicants must have an average of at least 70% in the most recent 5.0 credits completed and be enrolled in a Social Science Honours Specialization, Specialization or Major module and be registered in third or fourth year of a 15.0 credit or 20.0 credit degree program.

Extra Information: Pass/Fail

Note: 1) International students should consult the Experiential Learning Coordinator, Social Science about their eligibility. 2) Students may not take any academic courses during the internship work term.

COURSE WEIGHT: 0.00
BREADTH: CATEGORY A
SUBJECT CODE: SOCIAL SCIENCE

NEW CALENDAR COPY

Social Science 3991 Internship Work Term

Provides students with an 8-month supervised work term approved by the Faculty of Social Science. Students are required to submit a final assignment and provide a presentation on the work performed.

Co-requisite or prerequisite: Enrolment in or completion of Social Science 3994. Approval of, and acceptance into, an internship work term.

Extra Information: Pass/Fail

Note: 1) This credit cannot be included in the number of courses counted toward any degree or program; successful completion of Social Science 3991 and Social Science 3994 will be recognized on the student's transcript. 2) International students should consult the Experiential Learning Coordinator, Social Science about their eligibility. 3) Students may not take any academic courses during the internship work term.

COURSE WEIGHT: 3.00

BREADTH: CATEGORY A

SUBJECT CODE: SOCIAL SCIENCE

NEW CALENDAR COPY

Social Science 3992 Internship Work Term

Provides students with a 9 to 12-month supervised work term approved by the Faculty of Social Science. Students are required to submit a final assignment and provide a presentation on the work performed.

Co-requisite or Prerequisite(s): Enrolment in or completion of Social Science 3994. Approval of, and acceptance into, an internship work term.

Extra Information: Pass/Fail

Note: 1) This credit cannot be included in the number of courses counted toward any degree or program; successful completion of Social Science 3992 and Social Science 3994 will be recognized on the student's transcript. 2) International students should consult the Experiential Learning Coordinator, Social Science about their eligibility. 3) Students may not take any academic courses during the internship work term.

COURSE WEIGHT: 3.00

BREADTH: CATEGORY A

SUBJECT CODE: SOCIAL SCIENCE

NEW CALENDARY COPY

Social Science 3993 Internship Work Term

Provides students with a 13 to 16-month supervised work term approved by the Faculty of Social Science. Students are required to submit a final assignment and provide a presentation on the work performed.

Co-requisite or Prerequisite(s): Enrolment in or completion of Social Science 3994. Approval of and acceptance into, an internship work term.

Extra Information: Pass/Fail

Note: 1) This credit cannot be included in the number of courses counted toward any degree or program; successful completion of Social Science 3993 and Social Science 3994 will be recognized on the student's transcript. 2) International students should consult the Experiential Learning Coordinator, Social Science about their eligibility. 3) Students may not take any academic courses during the internship work term.

COURSE WEIGHT: 3.00

BREADTH: CATEGORY A

SUBJECT CODE: SOCIAL SCIENCE

SOCIAL SCIENCE INTERNSHP PROGRAM COURSE SUMMARY						
SHORT TERM INTERNSHIP (4-months)						
Course Number	Course Title	Credit Weight	Eligible students	Fee	Purpose	Notes
SS 3995A/B/Y	Internship: Preparation and Skill Development	0.50	Third and fourth-year students in a 15.0-credit or 20.0-credit program	N/A	Credit bearing (P/F).	Applied to student's record in the previous term.
Once a job offer is received, a student is also enrolled in:						
SS 3990A/B/Y	Internship Work Term	0.00	Third and fourth-year students in a 15.0-credit or 20.0-credit program	TBD	Generates fee.	Applied to student's record during work term.
LONG TERM INTERNSHIP (8 – 16 months)						
SS 3994	Internship: Preparation and Skill Development	1.00	Third year students in a 20.0-credit program	N/A	Credit bearing (P/F).	Applied to student's record in the previous academic year.
Once a job offer is received, a student is also enrolled in one of the following:						
SS 3991	Internship Work Term (8 months)	3.00	Third year students in a 20.0-credit program	\$700	Generates fee. 3.00 credit weight ensures students maintain FT status during internship.	Applied to student's record during work term.
SS 3992	Internship Work Term (9-12 months)	3.00		\$950		
SS 3993	Internship Work Term (13-16 months)	3.00		\$1,200		

ITEM 11.2(d)(ii) – Faculty of Social Science, Department of Psychology: Changes to the First Year Course Offerings in Psychology and Revisions to the Admission and Program Requirements of Modules

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, Psychology 1002A/B and Psychology 1003A/B be introduced by the Department of Psychology in the Faculty of Social Science, and

That effective September 1, 2021, Psychology 1000 be withdrawn, and

That effective September 1, 2021, the admission and program requirements for the modules offered by the Department of Psychology in the Faculty of Social Science (listed below) be revised as shown:

Honours Specialization in Psychology – BA
Honours Specialization in Psychology – BSc
Honours Specialization in Developmental Cognitive Neuroscience – BSc
Honours Specialization in Psychology/HBA
Major in Psychology
Minor in Psychology.

EXECUTIVE SUMMARY:

Changes to First Year Course Offerings in Psychology

The Department of Psychology proposes to withdraw Psychology 1000 and replace it with a pair of 0.5 credit courses that cover the same content. Psychology 1002A/B will be introduced to cover the natural science components of psychology and Psychology 1003A/B will be introduced to cover the social science components of psychology. Because a great deal of the content within the social science domain rests on a reasonable grounding of the biological elements of psychology, Psychology 1002A/B will be a prerequisite to Psychology 1003A/B.

This change is structural and has only small implications for the course content. However, many students have requested this change because it will allow greater flexibility to take the course at times that fit their different scheduling demands over the Fall and Winter terms. The change will also enhance scheduling flexibility for students transferring to the University or those joining the program later in their university career. In addition, the flexibility of offering two 0.5 courses will allow the Department to better manage teaching loads and provide appropriate course offerings to students. Draft course outlines are attached.

Changes to Admission and Program Requirements of Modules

The admission requirements for modules offered by the Department of Psychology will be modified to reflect this change to the first-year course offerings in Psychology.

Further, the admission requirements for modules offered by the Department of Psychology will be modified to reflect changes in the first-year course offerings of Applied Mathematics and Physics and Astronomy:

- Data Science 1000A/B has been introduced to replace Statistical Sciences 1024A/B.
- Applied Mathematics 1413 has been withdrawn. The replacement courses for engineering have not been added to reduce confusion. Students wishing to transfer from Engineering to Psychology may apply for special permission on a case-by-case basis.
- The Department of Physics and Astronomy will introduce Physics 1101A/B, 1102A/B, 1201A/B, 1202A/B, 1401A/B, and 1402A/B and withdraw Physics 1028A/B, 1029A/B, 1301A/B and 1302A/B as of September 1, 2021.

Additional changes to the admission requirements of modules include:

- Removal of Mathematics 0110A/B as it is insufficiently advanced to support the acquisition of requisite statistical skills in the program. Importantly, this change will affect only an extremely small number of students who wish to pursue a psychology BA module.
- Removal of courses that are no longer active, including: Chemistry 1100A/B, Chemistry 1200A/B, Linear Algebra 1600A/B, Calculus 1100A/B, Calculus 1201A/B, and Psychology 1200.

The Psychology Department has recently added two course codes based on previous courses taught as “special topics” offerings. These two courses (Psychology 4115F/G and 4260F/G), in cognition and neuroscience are being added as options within the program requirements of the Honours Specialization in Psychology – BSc, Honours Specialization in Developmental Cognitive Neuroscience – BSc, and Major in Psychology.

ATTACHMENTS:

[Revised Calendar Copy – Courses](#)
[Revised Calendar Copy – Modules](#)
[Draft course outlines](#)

NEW CALENDAR COPY

Psychology 1002A/B PSYCHOLOGY AS A NATURAL SCIENCE

An introductory survey of the methods and findings within modern scientific psychology. This course focuses on the biological aspects of human behaviour. The following topics will be covered: history and methodology, biological psychology, sensation and perception, learning and motivation, and verbal and cognitive processes.

Antirequisite(s): Psychology 1000, Psychology 1000W/X, Psychology 1010A/B, Psychology 1100E.

Extra Information: 2 Lecture Hours; 1 Tutorial Hour

Course Weight: 0.50

NEW CALENDAR COPY

Psychology 1003A/B PSYCHOLOGY AS A SOCIAL SCIENCE

An introductory survey of the methods and findings within modern scientific psychology. This course focuses on the social aspects of human behaviour. The following topics will be covered: verbal and cognitive processes, intelligence, developmental psychology, social psychology, individual differences (intelligence and personality), and clinical psychology.

Antirequisite(s): Psychology 1000, Psychology 1000W/X, Psychology 1015A/B, Psychology 1100E.

Prerequisite(s): Psychology 1002A/B or Psychology 1010A/B.

Extra Information: 2 Lecture Hours; 1 Tutorial Hour

Course Weight: 0.50

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21026>

HONOURS SPECIALIZATION IN PSYCHOLOGY - BA

Admission Requirements

Enrolment in this module is limited. Meeting the minimum requirements does not guarantee admission. Students who wish to enter the Honours Specialization in Psychology - BA module after Year 1 must have completed **the following** first-year requirements with no failures, and have a minimum average of 75% in 3.0 principal courses, including the following psychology and mathematics courses, plus 1.0 additional course, with no mark in these principal courses below 60%:

1.0 course from: Psychology 1000 **or Psychology 1002A/B AND Psychology 1003A/B.**

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, **Data Science 1000A/B, Mathematics 0110A/B,** Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Applied Mathematics 1201A/B, **the former** Statistical Sciences 1024A/B.

~~If Mathematics 0110A/B is selected then either Statistical Sciences 1024A/B or Mathematics 1228A/B must be taken.~~ Mathematics 1228A/B and **Data Science 1000A/B** ~~Statistical Sciences 1024A/B~~ is the recommended combination.

Students who wish to enter the Honours Specialization – BA after Years 2 and 3 must have a minimum cumulative average of 75% or cumulative average in their last 10.0 courses of 75%, with no mark below 60% in the module courses. Moreover, a minimum of 60% is needed in each of the 3.0 first-year principal courses, as listed in the module Admission Requirements above.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21027>

HONOURS SPECIALIZATION IN PSYCHOLOGY - BSc

Admission Requirements

Enrolment in this module is limited. Meeting the minimum requirements does not guarantee admission. Students who wish to enter the Honours Specialization in Psychology - BSc module after Year 1 must have completed the following first-year requirements with no failures, and have a minimum average of 75% in 3.0 principal courses, with no mark in these principal courses below 60%:

1.0 course from: Psychology 1000 **or Psychology 1002A/B AND Psychology 1003A/B.**

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, **Data Science 1000A/B,** Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Applied Mathematics 1201A/B, **the former** Applied Mathematics 1413, **the former** Statistical Sciences 1024A/B.

1.0 course from: Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B.

1.0 course from: Chemistry 1301A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer

Science 1026A/B, Computer Science 1027A/B, **the former** Physics 1028A/B, **the former** Physics 1029A/B, **Physics 1201A/B, Physics 1202A/B, the former** Physics 1301A/B, **the former** Physics 1302A/B, Physics 1501A/B, **and** Physics 1502A/B, **or the former Chemistry 1100A/B or the former Chemistry 1200B.**

1.0 option.

The principal courses include Psychology, the Mathematics/Calculus/Statistical Science course and one of the other science courses.

Students who wish to enter the Honours Specialization - BSc after Years 2 and 3 must have a minimum cumulative average of 75% or cumulative average in their last 10.0 courses of 75%, with no mark below 60% in the module courses. Moreover, a minimum of 60% is needed in each of the 3.0 first-year principal courses, as listed in the module Admission Requirements above.

Module

10.0 courses:

2.0 courses: Psychology 2800E, Psychology 2810.

1.0 course from: Psychology 2115A/B, Psychology 2134A/B, Psychology 2135A/B, Psychology 2210A/B, Psychology 2220A/B, Psychology 2221A/B.

1.0 course from: Psychology 2300-2799.

0.5 course: Psychology 3800F/G.

0.5 Research course from: Psychology 3184F/G, Psychology 3185F/G, Psychology 3285F/G, Psychology 3485F/G.

1.0 course from: Psychology 3300-3899.

1.0 course from: Psychology 3130A/B, Psychology 3138F/G, Psychology 3139A/B, Psychology 3140F/G, Psychology 3209F/G, Psychology 3221F/G, Psychology 3224A/B, Psychology 3225A/B, Psychology 3226A/B, Psychology 3228A/B, Psychology 3230F/G, Psychology 3440F/G, Psychology 3441F/G, Psychology 3442F/G, Psychology 3443F/G, Psychology 3444F/G, the former Psychology 3223F/G.

0.5 course from: Psychology 4100-4995.

0.5 course from: Psychology 2000-4999.

1.0 course from Science/Basic Medical Sciences-approved list numbered 2100 or above (see additional science requirement below).

1.0 course: Psychology 4850E, Psychology 4851E.

Note: To fulfill the BSc requirements within the Honours Specialization in Psychology - BSc module, 6.0 of the Psychology courses must be selected from the following list: Psychology 2115A/B, Psychology 2134A/B, Psychology 2135A/B, Psychology 2210A/B, Psychology 2220A/B, Psychology 2221A/B, Psychology 2800E, Psychology 2810, Psychology 3130A/B, Psychology 3138F/G, Psychology 3139A/B, Psychology 3140F/G, Psychology 3141F/G, Psychology 3184F/G, Psychology 3185F/G, Psychology 3195F/G, Psychology 3209F/G, Psychology 3221F/G, Psychology 3224A/B, Psychology 3225A/B, Psychology 3226A/B, Psychology 3228A/B, Psychology 3230F/G, Psychology 3285F/G, Psychology 3295F/G, Psychology 3440F/G, Psychology 3441F/G, Psychology 3442F/G, Psychology 3443F/G, Psychology 3444F/G, Psychology 3485F/G, Psychology 3800F/G, **Psychology 4115F/G**, Psychology 4195F/G, Psychology 4222F/G, Psychology 4223F/G, Psychology 4224F/G, **Psychology 4260F/G**, Psychology 4290F/G, Psychology 4295F/G, Psychology 4851E, the former Psychology 3223F/G, the

former Psychology 4190F/G.

Also, in order to satisfy graduation requirements for an Honours Bachelor of Science degree, students are required to take, outside the Psychology Honours Specialization BSc. module, an additional 1.0 course in Science/Basic Medical Science at the 2100-level or higher from the Faculty of Science; this course may be an option or part of another module (see Graduation Regulations for Honours Degrees - additional requirements for the Honours Bachelor of Science). This 1.0 course is in addition to the 1.0 Science/Medical Science course required within the Psychology Honours Specialization BSc. Module.

REVISED CALENDAR COPY

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21598>

HONOURS SPECIALIZATION IN PSYCHOLOGY – DEVELOPMENTAL COGNITIVE NEUROSCIENCE – BSc

Enrolment in this module is limited. Meeting the minimum requirements does not guarantee admission.

Admission Requirements

Enrolment in this module is limited. Meeting the minimum requirements does not guarantee admission. Students who wish to enter the Honours Specialization in Psychology – Developmental Cognitive Neuroscience (DCN) (BSc) module after Year 1 must have completed the following first-year requirements with no failures, and have a minimum average of 75% in 3.0 principal courses, with no mark in these principal courses below 60%:

- 1.0 course **from**: Psychology 1000 **or Psychology 1002A/B AND Psychology 1003A/B.**
- 1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, **Data Science 1000A/B**, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Applied Mathematics 1201A/B, **the former** Applied Mathematics 1413, **the former** Statistical Sciences 1024A/B .
- 1.0 course from: Biology 1001A or Biology 1201A and Biology 1002B or Biology 1202B.
- 1.0 course from: Chemistry 1301A/B, Chemistry 1302A/B, Computer Science 1025A/B, Computer Science 1026A/B, Computer Science 1027A/B, **the former** Physics 1028A/B, **the former** Physics 1029A/B, **Physics 1201A/B, the former** Physics 1301A/B, **the former** Physics 1302A/B, Physics 1501A/B and Physics 1502A/B, **or the former Chemistry 1100A/B, the former Chemistry 1200B.**
- 1.0 option.

The principal courses include Psychology, the Mathematics/Calculus/Statistical Science course and one of the other science courses.

Students who wish to enter the Honours DCN module after Years 2 and 3 must have a minimum cumulative average of 75% or cumulative average in their last 10.0 courses of 75%, with no mark below 60% in the module courses. Moreover, a minimum of 60% is needed in each of the 3.0 first-year principal courses, as listed in the module Admission Requirements above.

Module

10.0 courses:

- 0.5 course** from: Psychology 2220A/B, Psychology 2221A/B.
- 0.5 course** from: Psychology 2100-2299 (Excluding Psychology 2220A/B or Psychology 2221A/B).
- 0.5 course** from: Psychology 2040A/B, Psychology 2410A/B.
- 0.5 course** from: Psychology 2300- 2799 (excluding 2410A/B)
- 2.0 courses:** Psychology 2800E, Psychology 2810.
- 2.0 courses** from: Psychology 3141F/G, Psychology 3440F/G, Psychology 3441F/G, Psychology 3442F/G, Psychology 3443F/G, Psychology 3444F/G, the former Psychology 3223F/G.
- 1.0 course:** Psychology 3485F/G, Psychology 3800F/G.
- 0.5 course** from: Psychology 3300-3899 (Excluding the 3000-level Research courses).
- 0.5 course** from: Psychology 4100-4995.
- 1.0 course** from Science/Basic Medical Sciences-approved list numbered 2100 or above. (See additional Science Requirement below).
- 1.0 course:** Psychology 4852E

Notes:

The Honours Specialization in Developmental Cognitive Neuroscience BA module has been discontinued, effective September 2018. However, those enrolled in the module at that time may complete the requirements and graduate with an Honours Specialization in Developmental Cognitive Neuroscience BA.

Psychology 4852E is exclusively for students in the DCN Module. Thesis advisors must be approved by the DCN module coordinator.

To fulfill the BSc requirements within the Honours Specialization in Psychology – **Developmental Cognitive Neuroscience** - BSc module, 6.0 of the Psychology courses must be selected from the following list:

Psychology 2115A/B, Psychology 2134A/B, Psychology 2135A/B, Psychology 2210A/B, Psychology 2220A/B, Psychology 2221A/B, Psychology 2800E, Psychology 2810, Psychology 3130A/B, Psychology 3138F/G, Psychology 3139A/B, Psychology 3140F/G, Psychology 3141F/G, Psychology 3184F/G, Psychology 3185F/G, Psychology 3195F/G, Psychology 3209F/G, Psychology 3221F/G, Psychology 3224A/B, Psychology 3225A/B, Psychology 3226A/B, Psychology 3228A/B, Psychology 3230F/G, Psychology 3285F/G, Psychology 3295F/G, Psychology 3440F/G, Psychology 3441F/G, Psychology 3442F/G, Psychology 3443F/G, Psychology 3444F/G, Psychology 3485F/G, Psychology 3800F/G, **Psychology 4115F/G**, Psychology 4195F/G, Psychology 4222F/G, Psychology 4223F/G, Psychology 4224F/G, **Psychology 4260F/G**, Psychology 4290F/G, Psychology 4295F/G, Psychology 4852E, the former Psychology 3223F/G, the former Psychology 4190F/G. Also, in order to satisfy graduation requirements for an Honours Bachelor of Science degree, students are required to take, outside the Psychology Honours Specialization **DCN** BSc. module, an additional 1.0 course in Science/Basic Medical Science at the 2100-level or higher from the Faculty of Science; this course may be an option or part of another module (see Graduation Requirements for Honours Degrees - additional requirements for the Honours Bachelor of

Science). This 1.0 course is in addition to the 1.0 Science/Medical Science course required within the Psychology Honours Specialization BSc. Module.

REVISED CALENDAR COPY

<https://westerncalendar.uwo.ca/Modules.cfm?ModuleID=21321>

<https://westerncalendar.uwo.ca/Modules.cfm?ModuleID=21485>

HONOURS SPECIALIZATION IN PSYCHOLOGY/HBA

Admission Requirements

To be eligible for consideration for admission to the combined program, in the first two years students must complete a minimum of 10.0 courses including Business Administration 2257. In Year 1 they must complete the admission requirements as specified in the current Academic Calendar for entry into the Honours Specialization module offered by the Department of Psychology.

In Year 2 students must enrol in the Honours Specialization in the Department of Psychology and satisfy the minimum progression requirements for the second year of that Honours Specialization. Under certain conditions, students who in Year 2 enrol in a Major in Psychology may be eligible for admission to the combined degree program, but they will have to transfer into an Honours Specialization module in the Department of Psychology if they are accepted into the combined degree program. Such a transfer is only possible if they have taken the requisite courses and received the marks needed to transfer into an Honours Specialization module and are able to complete all the requirements of the combined degree program for that module.

In the first two years, students must attain a minimum weighted average of 78%, a minimum mark of 70% in Business Administration 2257, and no mark less than 60%. They must also gain admission to the HBA program through the regular application process. In addition, students must normally attain a minimum weighted average of 78% in the first year of the HBA.

Students apply for the combined degree program during the HBA 1 year, typically their third year of University. Applications to the combined program must be made in writing to the Undergraduate Program Advisor of the Department of Psychology and to the HBA Program Office by the deadlines published by the Richard Ivey School of Business. Entrance to the program may be limited.

Module/Program Information

Year 1

5.0 courses including:

1.0 course: Psychology 1000 **or Psychology 1002A/B AND Psychology 1003A/B.**

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B or the former Calculus 1100A/B, the former Calculus 1201A/B, **Data Science 1000A/B**, the former Linear Algebra 1600A/B, Mathematics 0110A/B, **Mathematics 1225A/B**, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Applied Mathematics 1201A/B, **the former Statistical Sciences 1024A/B.** (If Mathematics 0110A/B is selected, then either Statistical Sciences 1024A/B or Mathematics 1228A/B must be taken. Mathematics 1228A/B and **Data Science 1000A/B** ~~Statistical Sciences 1024A/B~~ is the recommended combination).

Completion of first-year requirements with no failures. Students must have an average of at least 75% in 3.0 principal courses, including **introductory psychology, Psychology 1000**, the mathematics courses, and 1.0 other course, with no mark in these principal courses below 60%.

Year 2

5.0 courses:

2.0 courses: Psychology 2800E, Psychology 2810.

0.5 course from: Psychology 2100-2299.

0.5 course from: Psychology 2300-2799.

1.0 course: Business Administration 2257.

1.0 course: Option (must be a course from Category B if not completed in Year 1).

Year 3 (HBA1)

The third year of the undergraduate program in Business Administration consists of an integrated set of courses (7.5 courses) designed to give a basic understanding of the functions and the interrelationships of the major areas of management, as well as to develop problem-solving and action-planning skills.

All students will take: Business Administration 3300K, Business Administration 3301K, Business Administration 3302K, Business Administration 3303K, Business Administration 3304K, Business Administration 3311K, Business Administration 3316K, Business Administration 3321K, Business Administration 3322K, Business Administration 3323K.

Years 4 and 5 (HBA Requirements can be taken over Year 4 or 5 - except Business Administration 4569 which must be taken in Year 4)

5.0 courses:

0.5 course: (International Perspective Requirement) Business Administration 4505A/B

0.5 course: (Corporations and Society Perspectives Requirement) At least one 0.5 course from Business Administration - Corporations and Society designated electives offered during the academic year (Business Administration 4538A/B, Business Administration 4539A/B, Business Administration 4588A/B, Business Administration 4625A/B) or other business elective as determined and approved by the HBA Program Director to satisfy this requirement.

0.5 course: (Managerial Accounting Requirement) Business Administration 4624A/B.

1.0 course: (Applied Project Requirement) Business Administration 4569.

2.5 additional business elective courses.

Years 4 and 5 (Psychology)

6.0 courses:

0.5 Research course from: Psychology 3184F/G, Psychology 3185F/G, Psychology 3285F/G, Psychology 3480F/G, Psychology 3485F/G, Psychology 3580F/G, Psychology 3780F/G, Psychology 3840F/G, Psychology 3860F/G.

0.5 course: Psychology 3800F/G.

0.5 course from: Psychology courses numbered 3100-3299 (excluding the Research courses listed above).

0.5 course from: Psychology courses numbered 3300-3799 (excluding the Research courses).

1.0 course from: Psychology courses numbered 2000-3999 (excluding the Research courses).

1.0 course from: Psychology courses at the 3000 level or above (excluding the Research courses).

0.5 course from: Psychology 4100-4995.

0.5 course from: Psychology courses numbered 2100-4999.

1.0 course: Psychology 4850E.

Note: To complete the program in five years, students must take a 1.0 course overload in Year 4 or Year 5, or a 0.5 overload in both Years 4 and 5.

For students who entered the HBA Program in September 2016 and prior, please refer to the 2016-2017 Academic Calendar.

REVISED CALENDAR COPY

<https://westerncalendar.uwo.ca/Modules.cfm?ModuleID=21024>

MAJOR IN PSYCHOLOGY

Admission Requirements

Completion of first-year requirements, including 1.0 course from Psychology 1000 **or Psychology 1002A/B AND Psychology 1003A/B** with a mark of at least 60%.

Students must also complete:

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, **or the former Calculus 1100A/B, the former Calculus 1201A/B, Data Science 1000A/B, the former Linear Algebra 1600A/B, Mathematics 0110A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Applied Mathematics 1201A/B, the former** Statistical Sciences 1024A/B.

If Mathematics 0110A/B is selected then either Statistical Sciences 1024A/B or Mathematics 1228A/B must be taken. Mathematics 1228A/B and Data Science 1000A/B Statistical Sciences 1024A/B is the recommended combination.

Module

6.0 courses:

1.0 course normally taken in second year: Psychology 2820E.

0.5 course in Psychology numbered 2100-2299.

0.5 course in Psychology numbered 2300-2799.

1.0 course in Psychology numbered 2100-2999.

1.0 course in Psychology numbered 2000-2999.

0.5 course in Psychology numbered 3100-3299.

0.5 course in Psychology numbered 3300-3799.

0.5 course in Psychology numbered 3100-3999.

0.5 course in Psychology numbered 3100-4999, excluding Psychology 4850E, Psychology 4851E and Psychology 4852E.

Notes:

1. Students who initially major in Psychology but wish to enter the Honours Specialization in Psychology module should select Psychology 2810 and Psychology 2800E in place of Psychology 2820E. (Psychology 2800E would count as a course numbered 2000-2999).

2. Combination with a Major module in Science or the Basic Medical Sciences may allow graduation with a 4 year BSc. To qualify for a 4 year BSc degree, 11.0 Science and/or Science-equivalent courses are required. When taken within this module, up to 3.0 of the following Psychology courses count towards meeting the requirement of 11.0 Science courses in a 4-Year BSc: Psychology 2115A/B, Psychology 2134A/B, Psychology 2135A/B, Psychology 2210A/B, Psychology 2220A/B, Psychology 2221A/B, Psychology 2800E, Psychology 2810, Psychology 2820E, Psychology 3130A/B, Psychology 3138F/G, Psychology 3139A/B, Psychology 3140F/G, Psychology 3141F/G, Psychology 3209F/G, Psychology 3221F/G, Psychology 3224A/B, Psychology 3225A/B, Psychology 3226A/B, Psychology 3228A/B, Psychology 3230F/G, Psychology 3285F/G, Psychology 3440F/G, Psychology 3441F/G, Psychology 3442F/G, Psychology 3443F/G, Psychology 3444F/G, Psychology 3485F/G, Psychology 3800F/G, **Psychology 4115F/G**, Psychology 4222F/G, Psychology 4223F/G, Psychology 4224F/G, **Psychology 4260F/G**, and the former Psychology 3223F/G.

REVISED CALENDAR COPY

<https://westerncalendar.uwo.ca/Modules.cfm?ModuleID=21025>

MINOR IN PSYCHOLOGY

Admission Requirements

Completion of first year **requirements**, including **1.0 course from either Psychology 1000 or Psychology 1002A/B AND Psychology 1003A/B** or the former Psychology 1200 with a mark of at least 60%.

Draft Outline: Psychology 1002A-200: Psychology as a Natural Science

1.0 CALENDAR DESCRIPTION

An introductory survey of the methods and findings within modern scientific psychology. This course focuses on the biological aspects of human behaviour. The following topics will be covered: history and methodology, biological psychology, sensation and perception, learning and motivation, and verbal and cognitive processes.

Antirequisites: Psychology 1000, Psychology 1000W/X, Psychology 1010A/B, Psychology 1100E.

Antirequisites are courses that overlap sufficiently in content that only one can be taken for credit. If you take a course that is an antirequisite to a course previously taken, you will lose credit for the earlier course, regardless of the grade achieved in the most recent course.

2 lecture hours; 1 tutorial hour, 0.5 course

2.0 COURSE INFORMATION

Instructor:	Dr. Mike Atkinson Room 6316, SSC (psyc1002@uwo.ca)
Lecture:	Online Asynchronous
Tutorial:	In-person Synchronous (see Timetable)
Office Hours:	Wed. 10:00 – 11:30 a.m. EST

This course uses a blended instruction model in which students must review and learn the main course material asynchronously, as well as to participate in synchronous discussion/tutorial activities via Zoom.

Teaching Staff

In addition to Dr. Atkinson, there are a number of Graduate Teaching Assistants assigned to Psych 1002. The graduate students have been part of the Department of Psychology from 1 to 6 years. Teaching assistants will run the tutorials. Please feel free to address any questions about the lectures, the program, or psychology in general to them as well as to Dr. Atkinson. The TAs also will hold office hours during the week.

Psych 1002 Web Site

The course website is located at: <http://owl.uwo.ca>

Here you will find class information, study suggestions, links to other resources, etc. Please check it often.

Questions

Asking questions during tutorial or about the online content is an extremely important part of learning. I strongly encourage you to ask a question whenever you require clarification on an issue, or have an observation to make yourself. If you wish to ask a question directly to Dr. Mike, please post your question to the “Questions and Office Hours” discussion in the Forums. **Note:** Routine questions such as —When is the exam? What chapters are covered for the midterm?, etc., may already be addressed on the FAQ portion of the course website.

A Note About Your Well-being

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit: <http://www.uwo.ca/uwocom/mentalhealth/> for more information on these resources and on mental health.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education at 519-661- 2147 or aew@uwo.ca for any specific question regarding an accommodation.

3.0 TEXTBOOK/READINGS

Required Text: Passer, M.W., Smith, R.E., Atkinson, M.L., & Mitchell, J.B., (2020). *Psychology: Frontiers and Applications*. Seventh Canadian Edition. Toronto: McGraw Hill Ryerson.

Note: this text comes shrink-wrapped with a passkey for the CONNECT website

Also, it is important to purchase the 7th edition—it has content that is not available in earlier editions and you will need the CONNECT code.

Recommended Text: Ellis, Toft & Dawson (2012). *Becoming a Master Student*. Nelson

4.0 COURSE OBJECTIVES

This course is an introductory level survey of the methods and findings related to the biological and methodological elements of modern scientific psychology. The goal is to provide students with an overview of various topic domains within this realm of psychology. As such, students will be exposed to diverse theoretical viewpoints and various methods and procedures for the scientific investigation of psychological issues. **Note:** Modern psychology is scientific in nature. Consequently, we will spend a lot of time discussing science-related topics such as research design, neural functioning, sensory mechanisms, brain structure, etc.

4.1 LEARNING OUTCOMES

Each chapter in the text covers a major interest area in psychology. By the end of this course, the successful student will be able to:

Learning Outcome	Learning Activity	Assessment
<i>Knowledge Acquisition</i> Identify major concepts, theories, and topics in <i>Psychology</i>	Reading & watching lectures, + CONNECT & tutorials	Multiple choice exams & participation
<i>Critical Thinking</i> Distinguish between and identify the relative strengths and weaknesses of various theories in Psychology	Reading & watching lectures, + CONNECT & tutorials	Multiple choice exams & participation
<i>Problem Solving; Inquiry and Analysis)</i>		

Apply concepts and theories from Psychology to everyday problems	Reading & watching lectures, + CONNECT & tutorial	Multiple choice exams, participation
<i>Communication</i> Ask questions about topics in Psychology	Online discussions & tutorial	Quality of posted/answered questions
<i>Critical Thinking; Problem Solving</i> Interpret statistical information presented in tables or graphs	Reading & watching lectures, + CONNECT	Multiple choice exams, participation
<i>Knowledge Acquisition; Inquiry and Analysis</i> Identify common research designs used in Psychology	Reading & watching lectures, + CONNECT & tutorials	Multiple choice exams, participation

5.0 EVALUATION

There will two exams during the year plus discussion posts, CONNECT work and tutorial participation. The midterm exam is set for **[DATE]** and is worth 32%. This exam will cover chapters 1 – 4, plus the Appendix and will consist of 75 multiple choice questions from both the text and lecture material. The final exam will be scheduled during the final exam period (**[DATE]**) and is worth 32%. The final exam covers chapters 5 – 8, and will consist of 75 multiple choice questions from both the text and lecture material.

Exams will be written in the following manner: During the exam periods, you will be directed to log into OWL. Once, you are in OWL, you will receive a randomized test from the test bank. Each student will receive a different exam. Each exam will be the same level of difficulty and covers the same chapters. Questions will be answered in a strict linear fashion. Once you move from question 1 to question 2, you cannot go back to question 1. So you should answer each question as it appears. To get through all the questions in the time period allowed, you should spend no more than 90 - 120 seconds on each question.

In addition to the exams, you must complete a series of quizzes on the **CONNECT** site (one quiz per chapter). The total value for the quizzes is 6%.

Discussions and tutorial participation also count towards your final grade. Discussions (2) are worth 10% (5% each) and conducted in the Forums section of OWL. Details about the format and a grading scheme will be posted on Owl. NOTE: Discussions will open two weeks before the closing date.

Weekly tutorials count for the remaining 20% of your grade (2% per tutorial). For each tutorial, you will be asked to discuss topics related to the chapter we are currently covering in the text. The grading scheme will be posted on OWL.

Policy on Missed Coursework. If you miss an exam for a legitimate reason (legitimate reasons are those approved by academic counselling in your home faculty), there will be one, and only one makeup. If you cannot write the makeup for a legitimate reason, your grade will be prorated across the other components in that term (i.e., the value of the missed exam will be distributed across the other assessments). Missing a discussion for a legitimate reason will result in the discussion value being added to the other discussion grade. For tutorials, you are allowed to miss one without penalty. For CONNECT there is ample time to complete the quizzes. However, missing a chapter for a legitimate reason will result in prorating across the other quizzes for that term.

Finally, there is a research participation requirement (see details on the Owl site). **Please note that this is a Department of Psychology requirement and does not add marks to your grade. Failure to meet the research requirement will result in a loss of up to 10 points on your final grade.**

EVALUATION GUIDELINES

Although the Psychology Department does not require instructors to adjust their course grades to conform to specific targets, the expectation is that course marks will be distributed around the following averages:

- 70% 1000-level and 2000-level courses
- 72% 2100-2990-level courses
- 75% 3000-level courses
- 80% 4000-level courses

The Psychology Department follows Western University's grading guidelines, which are as follows (see the following link):

http://www.uwo.ca/univsec/pdf/academic_policies/general/grades_undergrad.pdf

- A+ 90-100 One could scarcely expect better from a student at this level
- A 80-89 Superior work that is clearly above average
- B 70-79 Good work, meeting all requirements, and eminently satisfactory
- C 60-69 Competent work, meeting requirements
- D 50-59 Fair work, minimally acceptable
- F below 50 Fail

Please note that department policy prohibits the practice of rounding "close" grades to the next number up. For example, if you receive 89.2%, your grade will register as 89%.

6.0 TEST AND EXAMINATION SCHEDULE

Midterm test:	32%	[DATE]
Final exam:	32%	Final Exam Period ([DATE])
Discussion:	5%	Discussion 1 due by Fri. [DATE]
	5%	Discussion 2 due by Fri. [DATE]
Quizzes:	3%	Chapter 1 – 4 due by [DATE]
	3%	Chapter 5 – 8 due by [DATE]
Tutorials:	20%	Graded weekly

Total: 100%

7.0 CLASS SCHEDULE

Psychology 1002 Lecture Calendar

Topics will be covered in the following order during the year. Approximate lecture dates are given so that you can keep up with the readings and video lectures. Tutorials are synched to the Lecture topics. **Lectures are intended to highlight certain areas of each topic -- there is not enough time available to us to cover all the material.** However, you are responsible for **all** the material in the text. Please note that there is a fairly heavy reading load in this course -- we cover approximately one chapter every week and half. Thus, it is important for you to keep up with the readings.

WEEK OF	CHAPTER	TOPIC
Monday [DATE].	1	Introduction/History of Psychology
Monday [DATE]	2/Appendix	Methodology/Data Analysis/Statistics
Monday [DATE]	3	Brain & Nervous System
Monday [DATE]	3	Brain & Nervous System
Monday [DATE]	4	Genetics & Evolution
Monday [DATE]	5	Sensation/Perception
Monday [DATE]	5	Sensation/Perception
Monday [DATE]	-	NO CLASS (FALL READING WEEK)
Monday [DATE]	6	Consciousness
Monday [DATE]	7	Learning
Monday [DATE]	8	Memory
Monday [DATE]	8	Memory
Monday [DATE]		Q & A/Review
FINAL EXAM (TBD)		

Appendix 2: Draft Outline: Psychology 1003B-200: Psychology as a Social Science

1.0 CALENDAR DESCRIPTION

An introductory survey of the methods and findings within modern scientific psychology. This course focuses on the social aspects of human behaviour. The following topics will be covered: verbal and cognitive processes, intelligence, developmental psychology, social psychology, individual differences (intelligence and personality), and clinical psychology.

Antirequisites: Psychology 1000, Psychology 1000W/X, Psychology 1015A/B, Psychology 1100E.

Antirequisites are courses that overlap sufficiently in content that only one can be taken for credit. If you take a course that is an antirequisite to a course previously taken, you will lose credit for the earlier course, regardless of the grade achieved in the most recent course.

Prerequisites: **Psychology 1002A/B or Psychology 1010A/B**

2 lecture hours, 1 tutorial hour, 0.5 course

Please note: You are responsible for ensuring that you have successfully completed all course prerequisites. Lack of prerequisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed at any time and will receive no adjustment to your fees. This decision cannot be appealed. If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only protect your academic record, but will ensure that spaces become available for students who require the course for graduation.

2.0 COURSE INFORMATION

Instructor:	Dr. Mike Atkinson Room 6316, SSC (psyc1003@uwo.ca)
Lecture:	Online Asynchronous
Tutorial:	Online Synchronous (see Timetable)
Office Hours:	Wed. 10:00 – 11:30 a.m. EST

This course uses a blended instruction model in which students must review and learn the main course material asynchronously, as well as to participate in synchronous discussion/tutorial activities via Zoom.

Teaching Staff

In addition to Dr. Atkinson, there are a number of Graduate Teaching Assistants assigned to Psych 1003. The graduate students have been part of the Department of Psychology from 1 to 6 years. Teaching assistants will run the tutorials. Please feel free to address any questions about the lectures, the program, or psychology in general to them as well as to Dr. Atkinson. The TAs also will hold office hours during the week.

Psych 1003 Web Site

The course website is located at: <http://owl.uwo.ca>

Here you will find class information, study suggestions, links to other resources, etc. Please check it often.

Questions

Asking questions during tutorial or about the online content is an extremely important part of learning. I strongly encourage you to ask a question whenever you require clarification on an issue, or have an observation to make yourself. If you wish to ask a question directly to Dr. Mike, please post your

question to the “Questions and Office Hours” discussion in the Forums. **Note:** Routine questions such as —When is the exam? What chapters are covered for the midterm?, etc., may already be addressed on the FAQ portion of the course website.

A Note About Your Well-being

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit: <http://www.uwo.ca/uwocom/mentalhealth/> for more information on these resources and on mental health.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education at 519-661- 2147 or aew@uwo.ca for any specific question regarding an accommodation.

3.0 TEXTBOOK/READINGS

Required Text: Passer, M.W., Smith, R.E., Atkinson, M.L., & Mitchell, J.B., (2020). ***Psychology: Frontiers and Applications***. Seventh Canadian Edition. Toronto: McGraw Hill Ryerson.

Note: this text comes shrink-wrapped with a passkey for the CONNECT website
Also, it is important to purchase the 7th edition—it has content that is not available in earlier editions and you will need the CONNECT code.

Recommended Text: Ellis, Toft & Dawson (2012). ***Becoming a Master Student***. Nelson

4.0 COURSE OBJECTIVES

This course is an introductory level survey of the methods and findings related to the social and cognitive aspects of modern scientific psychology. The goal is to provide students with an overview of various topic domains within the realm of psychology. As such, students will be exposed to diverse theoretical viewpoints and various methods and procedures for the scientific investigation of psychological issues. **Note:** Modern psychology is scientific in nature. Consequently, we will spend time discussing science-related topics such as research designs, brain structure, etc. as they apply to psychology as a social science.

4.1 LEARNING OUTCOMES

Each chapter in the text covers a major interest area in psychology. By the end of this course, the successful student will be able to:

Learning Outcome	Learning Activity	Assessment
<i>Knowledge Acquisition</i> Identify major concepts, theories, and topics in <i>Psychology</i>	Reading & watching lectures, + CONNECT & tutorials	Multiple choice exams & participation
<i>Critical Thinking</i>		

Distinguish between and identify the relative strengths and weaknesses of various theories in Psychology	Reading & watching lectures, + CONNECT & tutorials	Multiple choice exams & participation
<i>Problem Solving; Inquiry and Analysis)</i> Apply concepts and theories from Psychology to everyday problems	Reading & watching lectures, + CONNECT & tutorial	Multiple choice exams, participation
<i>Communication</i> Ask questions about topics in Psychology	Online discussions & tutorial	Quality of posted/answered questions
<i>Critical Thinking; Problem Solving</i> Interpret statistical information presented in tables or graphs	Reading & watching lectures, + CONNECT	Multiple choice exams, participation
<i>Knowledge Acquisition; Inquiry and Analysis</i> Identify common research designs used in Psychology	Reading & watching lectures, + CONNECT & tutorials	Multiple choice exams, participation

5.0 EVALUATION

There will two exams during the year plus discussion posts, CONNECT work and tutorial participation. The midterm exam is set for **[DATE]** and is worth 32%. This exam will cover chapters 9 – 13, plus the Appendix and will consist of 75 multiple choice questions from both the text and lecture material. The final exam will be scheduled during the final exam period (**[DATE]**) and is worth 32%. The final exam covers chapters 14 – 17, and will consist of 75 multiple choice questions from both the text and lecture material.

Exams will be written in the following manner: During the exam periods, you will be directed to log into OWL. Once, you are in OWL, you will receive a randomized test from the test bank. Each student will receive a different exam. Each exam will be the same level of difficulty and covers the same chapters. Questions will be answered in a strict linear fashion. Once you move from question 1 to question 2, you cannot go back to question 1. So you should answer each question as it appears. To get through all the questions in the time period allowed, you should spend no more than 90 - 120 seconds on each question.

In addition to the exams, you must complete a series of quizzes on the **CONNECT** site (one quiz per chapter). The total value for the quizzes is 6%.

Discussions and tutorial participation also count towards your final grade. Discussions (2) are worth 10% (5% each) and conducted in the Forums section of OWL. Details about the format and a grading scheme will be posted on Owl. NOTE: Discussions will open two weeks before the closing date.

Weekly tutorials count for the remaining 20% of your grade (2% per tutorial). For each tutorial, you will be asked to discuss topics related to the chapter we are currently covering in the text. The grading scheme will be posted on OWL.

Policy on Missed Coursework. If you miss an exam for a legitimate reason (legitimate reasons are those approved by academic counselling in your home faculty), there will be one, and only one, makeup. If you cannot write the makeup for a legitimate reason, your grade will be prorated across the other components in that term (i.e., the value of the missed exam will be distributed across the other assessments). Missing a discussion for a legitimate reason will result in the discussion value being added to the other discussion grade. For tutorials, you are allowed to miss one without penalty. For CONNECT there is ample time to complete the quizzes. However, missing a chapter for a legitimate reason will result in prorating across the other quizzes for that term.

Finally, there is a research participation requirement (see details on the Owl site). **Please note that this is a Department of Psychology requirement and does not add marks to your grade. Failure to meet the research requirement will result in a loss of up to 10 points on your final grade.**

EVALUATION GUIDELINES

Although the Psychology Department does not require instructors to adjust their course grades to conform to specific targets, the expectation is that course marks will be distributed around the following averages:

70% 1000-level and 2000-level courses

72% 2100-2990-level courses

75% 3000-level courses

80% 4000-level courses

The Psychology Department follows Western University's grading guidelines, which are as follows (see the following link):

http://www.uwo.ca/univsec/pdf/academic_policies/general/grades_undergrad.pdf

- A+ 90-100 One could scarcely expect better from a student at this level
- A 80-89 Superior work that is clearly above average
- B 70-79 Good work, meeting all requirements, and eminently satisfactory
- C 60-69 Competent work, meeting requirements
- D 50-59 Fair work, minimally acceptable
- F below 50 Fail

Please note that department policy prohibits the practice of rounding "close" grades to the next number up. For example, if you receive 89.2%, your grade will register as 89%

6.0 TEST AND EXAMINATION SCHEDULE

Midterm test: 32% [DATE]

Final exam:	32%	Final Exam Period ([DATE])
Discussion:	5%	Discussion 1 due by Fri. [DATE]
	5%	Discussion 2 due by Fri. [DATE]
Quizzes:	3%	Chapter 9 - 13 due by [DATE]
	3%	Chapter 14 – 17 due by [DATE]
Tutorials	20%	Graded weekly
Total	100%	

7.0 CLASS SCHEDULE

Psychology 1003 Lecture Calendar

Topics will be covered in the following order during the year. Approximate lecture dates are given so that you can keep up with the readings and video lectures. Tutorials are synched to the Lecture topics. **Lectures are intended to highlight certain areas of each topic -- there is not enough time available to us to cover all the material.** However, you are responsible for **all** the material in the text. Please note that there is a fairly heavy reading load in this course -- we cover approximately one chapter every week and half. Thus, it is important for you to keep up with the readings.

WEEK OF	CHAPTER	TOPIC
Monday [DATE]	9	Language & Thinking
Monday [DATE]	10	Intelligence
Monday [DATE]	11	Motivation & Emotion
Monday [DATE]	12	Development (Childhood)
Monday [DATE]	12	Development (Adult)
Monday [DATE]	13	Behaviour in a Social Context
Monday [DATE]	-	NO CLASS (SPRING READING WEEK)
Monday [DATE]	13	Behaviour in a Social Context
Monday [DATE]	14	Personality
Monday [DATE]	15	Stress/Psychological Disorders
Monday [DATE]	16	Psychological Disorders/ Treatment
Monday [DATE]	17	Psychological Treatment/Stress Health Coping
Monday [DATE]	-	Q & A/Review
FINAL EXAM	(TBD)	

ITEM 11.2(e)(i) – Revisions to the “Course Credit” Policy (Discovery Credits)

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the “Course Credit” policy be revised as shown.

EXECUTIVE SUMMARY:

Several changes to the Course Credit policy are recommended to respond to common misunderstandings around Discovery Credit eligibility. New language has been added to clarify failures, student eligibility, and program and course eligibility. Additionally, new deadlines have been included to reduce the late/retroactive requests to Dean’s Offices.

ATTACHMENT:

[Revised Calendar Copy – Course Credit](#)

REVISED CALENDAR COPY

https://www.uwo.ca/univsec/pdf/academic_policies/registration_progression_grad/coursecredit.pdf

Course Credit

DISCOVERY CREDITS

Students are advised to carefully consider the impact of including Discovery Credits on their program of study at Western:

- Grades are used within Western to determine eligibility for specified programs of study such as the Ivey Advanced Entry Opportunity (AEO). Discovery Credits will not count towards the 10.0 credits required to apply for the Honours Business Administration program;
- Admission to graduate programs and to professional schools, in addition to certain funding options, may not be in line with the Discovery Credits framework;
- Grades are used by many organizations outside the University to evaluate students.

Students are permitted to designate up to 1.0 Discovery Credit course (or equivalent) for pass/fail grading that can be counted toward the overall course credits required for their degree program (Honours and Four Year = 20 credits, Three Year = 15 credits). Course(s) selected as Discovery Credit(s) may not be counted towards the mandatory courses in completion of an Honours Specialization, Specialization, Major, Minor modules, or Certificates and Diplomas, in which the student is currently registered. Discovery Credits may be used to satisfy course pre-requisite requirements.

Discovery Credits will have the following considerations:

1. **Pass/Fail Graded:** Such registration is subject to all the rules and regulations that apply to courses taken for credit, except that the grade recorded by the Office of the Registrar will be either pass (PAS) or fail (FAI). No courses may be changed from pass/fail to number graded or from number graded to pass/fail after the last date for dropping a course without academic penalty.
2. **Deadline:** The deadline to declare a Discovery Credit course is specific to the term and session in which the student is enrolled in the course. Students may declare a Discovery Credit course no later than the following dates:

Fall/Winter Term

Session	Deadline
Fall	January 15
Winter	May 15
Fall/Winter	May 15

Summer Term

Session	Deadline
Distance Studies	August 15
Summer Evening	August 15
Intersession	July 15
Summer Day	August 31

No courses may be changed from pass/fail to number graded or from number graded to pass/fail after the deadline.

3. **Conversion of numerical grades to Discovery Credits**
Pass: 50 - 100%
Fail: 0 – 49%
4. **Student Eligibility:**
 - a) Only students identified as Undergraduate Students registered in a first entry undergraduate degree program at Western are eligible.
 - b) The following are NOT eligible to select Discovery Credit courses:
First-year students, Visiting Students, Special Students, **students in Undeclared Status**, and Graduate Students
 - c) Undergraduate students placed on academic probation may be eligible to participate with permission of the Dean.
5. **Program and Course Eligibility:**
 - a) A student looking to enter a module or program of study may use a Discovery **Credit course** ~~Course credit~~ as a required course credit in that module or program of study only with the permission of the Dean or designate.
 - b) Registration in a course must meet existing course entrance requirements.
 - c) **A student may not declare a Discovery Credit for a course in a subject area in which they have previously received credit for a senior-level undergraduate course (courses numbered 2000-4999) in the same subject area.**
 - d) Students cannot use Discovery **Credit** ~~Course credits~~ for courses in which they have been charged with academic dishonesty.
 - e) The Discovery **Credit course** ~~Course credit~~ counts towards the normal course load.
 - f) The following programs are excluded from this policy: Engineering, Nursing, Bachelor of Music, **Bachelor of Musical Arts**, Law, Bachelor of Education, **Ivey** Business and Medicine and Dentistry.
6. **Impact on Averages and Awards:** Discovery Credit courses will be excluded from term, cumulative and graduation averages. **A Discovery Credit failure will be counted towards the number of failed courses.** Eligibility for Dean’s Honour Listing, Graduation With Distinction, University Gold Medals, and Scholarships and Awards will not be adversely impacted. Calculations will be made using remaining graded courses.
7. **Academic Record and Student Transcript:** Discovery Credit courses will be identified on the academic record and on student transcripts. Discovery Credit courses will not display a number grade on the academic record or on student transcripts. The Office of the Registrar will retain the number grade information submitted by the department, but it will not normally be available for students.
8. **Breadth and Essay Requirements:** Discovery Credit courses may be counted toward breadth requirements; however, may not be counted toward essay requirements.
9. **Student Responsibility:** It is the student’s responsibility to carefully review any graduate or professional school, award programs, government (e.g., OSAP) and University aid and award eligibility rules which may be affected by the use of Discovery Credit courses.

The rest of the policy is unchanged

ITEM 11.2(e)(ii) – Revisions to the “Gold Medals” Policy

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That effective September 1, 2021, the “Gold Medals” policy be revised as shown.

EXECUTIVE SUMMARY:

The proposed change clarifies that Western Gold Medals are awarded to graduating students annually in June.

ATTACHMENT:

[Revised Calendar Copy – Gold Medals](#)

REVISED CALENDAR COPY

https://www.uwo.ca/univsec/pdf/academic_policies/scholarship/medals.pdf

GOLD MEDALS

Convocation – Awards, Prizes and Medals to be Listed in Convocation Publications

All graduating awards/prizes/medals will be listed in the convocation program with the relevant winners' names. **Western Gold Medals are awarded annually in June.**

Eligibility for Western Gold Medals

Modular Structure Requirements

Nominee eligibility requirements:

- i. Achieved a minimum modular average of 80% with no grade less than 70% in the courses of the module;

Note: Students in the basic medical science modules must have achieved a minimum modular average of 85% with no grade less than 70% in the courses of the module.

- ii. No course grade of F;
- iii. Awarded Dean's Honour List per graduating students policy.

The rest of the policy is unchanged

ITEM 11.2(f)(i) – Renewal of the Articulation Agreement for the Admission of Graduates of the Nutrition and Food Service Management Diploma Program at Centennial College into the Bachelor of Science (Foods and Nutrition) Program at Brescia University College

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That Senate recommend to the Board of Governors, that effective May 1, 2021, graduates of the Nutrition and Food Service Management Diploma Program at Centennial College be admitted to the Bachelor of Science (Foods and Nutrition) Program at Brescia University College (Honours Specialization in Nutrition and Dietetics, Honours Specialization in Foods and Nutrition, Specialization in Foods and Nutrition), as set out in the attached articulation agreement.

EXECUTIVE SUMMARY:

This agreement is a renewal that relates to students studying in the Centennial Nutrition and Food Service Management Diploma Program. Effective May 1, 2021, Brescia University College proposes to accept students from this program into the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics program, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition program as set out in the attached Articulation Agreement between the two institutions.

The objectives of the agreement are to provide graduates from Centennial, who satisfy the criteria described in this agreement, with the opportunity to apply for admission to the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics program, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition program and obtain a Western degree.

ATTACHMENT:

[Articulation Agreement](#)

AGREEMENT FOR OUTBOUND ARTICULATION

B E T W E E N:

CENTENNIAL COLLEGE OF APPLIED ARTS AND TECHNOLOGY

941 Progress Ave, Scarborough, ON M1G 3T8

hereinafter referred to as "Centennial" of the first part.

-and-

BRESCIA UNIVERSITY COLLEGE

1285 Western Rd, London, ON N6G 1H2

hereinafter referred to as "**Brescia**", of the second part;

THIS AGREEMENT made this **May 2021**

ARTICULATION AGREEMENT

THIS AGREEMENT made BETWEEN:

THE UNIVERSITY OF WESTERN ONTARIO
(hereinafter called “Western”)

and

BRESCIA UNIVERSITY COLLEGE
(hereinafter called “Brescia”)

and

CENTENNIAL COLLEGE OF APPLIED ARTS AND TECHNOLOGY
(hereinafter called “Centennial”)

WHEREAS Western, Brescia, and Centennial wish to increase student mobility between Centennial and Western and Centennial and Brescia, and the parties recognize that credit transfer is a key means to encourage such mobility;

AND WHEREAS the parties wish to facilitate the admission of qualified graduates of the Nutrition and Food Service Management diploma program at Centennial to the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition Program at Western and Brescia by entering into an articulation agreement recognized by the Ontario Council for Articulation and Transfer (ONCAT), and wish to set out clearly defined processes for the movement of the graduates between Centennial and Western and Centennial and Brescia;

NOW THEREFORE in consideration of the mutual covenants herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follow:

ADMISSION

1. Western and Brescia agree to consider for admission to Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition Program graduates of the Nutrition and Food Service Management diploma program from Centennial who meet the following requirements:

- a. Successful completion of the Nutrition and Food Service Management diploma with a competitive overall admission average for the year in which they apply as calculated by Western and Brescia;
- b. completion of the prescribed set of courses within the Nutrition and Food Services Management diploma with a minimum grade of “C” or 2.00 GPA in each college course as outlined in Appendix 1; and
- c. Successful completion of Ontario Secondary School Biology (SBI4U) and Chemistry (SCH4U); or an equivalent as approved by the receiving institutions.

2. **In order** to be considered for admission, Centennial students must submit an application and academic transcripts to the relevant Admissions Office by June 1st of the year in which they are seeking admission.

3. Admissions decisions are within the sole discretion of Western and Brescia and are not appealable. Applicants who meet the requirements set out above are not guaranteed admission under this Agreement. The decision as to the number of students who will be accepted in any academic year may vary from year to year. Final determination of the validity of all admissions under this agreement rests with the Registrars at Western and Brescia in accordance with the provisions of the affiliation agreement between Western and Brescia.

TRANSFER CREDIT

4. Western and Brescia shall grant transfer credit to successful applicants for Centennial courses in accordance with **Appendix 1**.
5. The course names and numbers set out in **Appendix 1** may be revised from time to time with the agreement in writing of the parties. Failure to provide timely notification to Western and Brescia of changes to Centennial's course names or numbers may result in denial of admission and transfer credit to qualified applicants.
6. The parties acknowledge that the granting of transfer credit is based on an assessment of the Nutrition and Food Service Management diploma program curriculum and the courses as of the date of this Agreement. It is the responsibility of Centennial to notify Western and Brescia of any subsequent changes or anticipated changes to the curriculum or content of the courses and provide sufficient information to enable Western and Brescia to decide whether transfer credit will continue to be granted for these courses.

GENERAL

7. Students accepted under this Agreement must complete the courses set out in **Appendices 2A, 2B or 2C** and meet the progression and graduation requirements for a Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics **Appendix 2A**, or Honours Specialization in Foods and Nutrition **Appendix 2B**, or Specialization in Foods and Nutrition Program **Appendix 2C**. These progression and degree requirements are subject to change during the term of this Agreement, and Western and Brescia will give Centennial written notice of any changes.
8. Students who subsequently fail to meet progression or degree requirements for the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition Program but who do meet requirements for another program at Brescia or Western may be permitted to transfer to another program at the discretion of the relevant Faculty. Students who transfer to another program or campus may have the transfer credits removed from their academic record and credit for college courses may be re-assessed by the relevant Faculty.
9. Western and Brescia agree to provide Centennial students with information about the transfer credits and encourage qualified students to apply.
10. The parties shall each designate a Program representative to assist with the operation of this Agreement. The program representatives and other relevant staff at each institution shall meet at least once every two years to review their processes and determine if changes are needed to meet the objectives of the parties.

TERM

11.(a) This Agreement is effective May 1, 2021 and shall continue in force unless terminated by a party as set out herein.

(b) Any party may terminate this Agreement upon three months' written notice of termination to the other parties. No applicants will be considered for admission after the date of such notice.

(c) Notwithstanding paragraph (b), if Western or Brescia decide to terminate this Agreement due to changes to the Centennial's curriculum or course content, this Agreement shall terminate on a date that is the earlier of three months after written notice of termination is given to Centennial and the date that the changes were made by Centennial.

(d) Students accepted for admission under this Agreement prior to issuance of a notice of termination shall be permitted to complete their studies under the terms of this Agreement.

IN WITNESS WHEREOF the parties have executed this Agreement under the hands of their duly authorized officers.

CENTENNIAL COLLEGE OF APPLIED ARTS AND TECHNOLOGY

*

Ann Buller
President

Date

BRESCIA UNIVERSITY COLLEGE

*

Cheryl Jensen
Interim Principal

Date

THE UNIVERSITY OF WESTERN ONTARIO

*

Dr. John Doerksen
Vice-Provost (Academic Programs)

Date

*I have authority to bind the institution.

APPENDIX 1

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Honours Specialization in Nutrition and Dietetics, or Honours
Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition
and
Centennial College (Nutrition and Food Service Management diploma),
May 1, 2021

Western/Brescia Course	Western/ Brescia Credit Weight	Centennial Course	Centennial Course Title	Centennial Credit Weight
Foods and Nutrition 1070A/B & Foods and Nutrition 1241A/B	1.0	NFSM-109	Nutrition 1	3.0
		NFSM-110	Nutrition 2	3.0
Writing 1020F/G	0.5	COMM-160/161	College Communications 1	3.0
		COMM-170/171	College Communications 2	3.0
Human Ecology 1020TRN	0.5	NFSM-201	Communications and Interprofessional Approaches in Health Care and Food Services	3.0
Sociology 1020TRN	0.5	GNED-500	Global Citizenship: From Social Analysis to Social Action	3.0
Foods and Nutrition 2100TRN	0.5	NFSM-100	Principles of Sanitation, Safety and Hygiene	3.0
		NFSM-105	Kitchen Production	3.0
		NFSM-108	Introduction to Food Services	3.0
		NFSM-112	Food Properties Analysis	3.0
Foods and Nutrition 2449A/B	0.5	NFSM-117	Mathematics for Food Service Management	3.0
		NFSM-202	Organizational Behaviour in Food Services	3.0
		NFSM-210	Marketing and Merchandising for Food Services Operations	3.0
		NFSM-203	Human Resources Management in Food Services	3.0
Foods and Nutrition 2100TRN	0.5	NFSM-213	Recipe Development and Costing	2.0
		NFSM-216	Health Care Menu Planning	2.0
Foods and Nutrition 3348A/B & Foods and Nutrition 3100TRN	1.0	NFSM-115	Purchasing for the Food Services Industry	3.0
		NFSM-208	Food Service Accounting	3.0
		NFSM-207	Facilities Planning and Design	3.0
		NFSM-223	Food Services Systems Management	3.0
		NFSM-219	Professional Practice Seminar	2.0
Foods and Nutrition 3100TRN	0.5	NFSM-221	Financial Management	2.0
		NFSM-206	Medical Nutrition Therapy	3.0
Foods and Nutrition 4449A/B	0.5	NFSM-211	Supervision Practices	3.0
		NFSM-217	Field Placement	3.0

Total: 6.0 credits

APPENDIX 2A

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Honours Specialization in Nutrition and Dietetics,
and
Centennial College (Nutrition and Food Service Management diploma),
May 1, 2021

Course Requirements for Degree Completion Brescia Bachelor of Science (Foods and Nutrition) Honours Degree Program		
<u>Honours Specialization in Nutrition and Dietetics</u>		
To graduate from the BSc Honours Specialization in Nutrition and Dietetics degree program at Brescia, students admitted under this articulation agreement must successfully complete the 14.0 courses listed below. Brescia will provide Fanshawe with written notice of any changes to these course requirements. A final average of 75%, with no grade less than 60% must be achieved to graduate from the BSc (F&N) degree program.		
Credit Weight	Brescia/Western Course Number	Brescia/Western Course Name
Year 2 Requirements (Fall/Winter Term)		
0.5	Chemistry 1301A/B	Discovering Chemical Structure
0.5	Chemistry 1302A/B	Discovering Chemical Energetics
0.5	Biology 1290B	Biology and Microorganisms
1.0	Physiology 1021	Introduction to Human Physiology
0.5	Human Ecology 2222A/B	Professional Perspectives
0.5	Foods and Nutrition 1241 A/B	Lifecycle Nutrition
0.5	Foods and Nutrition 2266F/G	Nutrition Education and Communication
0.5	Foods and Nutrition 3355A/B	Agriculture and Food Systems: Critical Conversations
0.5	Elective	Breadth Requirement: Category "B" Arts and Humanities, or Languages
Year 3 Requirements (Fall/Winter Term)		
0.5	Biochemistry 2288A	Biochemistry and Molecular Biology for Foods and Nutrition
0.5	Chemistry 2003A/B	Organic and Biological Chemistry for Food Science
0.5	Foods and Nutrition 2230A/B	Integrated Human Nutrition
1.0	Foods and Nutrition 2232	Principles of Food Science
0.5	Foods and Nutrition 3344A/B	Diet and Nutritional Assessment
0.5	Foods and Nutrition 3351A/B	Clinical Nutrition I
0.5	Foods and Nutrition 3361A/B	Fundamentals of Community Nutrition
1.0	Elective	(Consider choosing essay designated course to fulfill essay course requirements for graduation)
Year 4 Requirements (Fall/Winter Term – only 4.0 credits required for final year)		
0.5	Foods and Nutrition 3342A/B	Advanced Food Science
1.0	Foods and Nutrition 3390W/X	Research Methods and Statistics for Food and Nutrition
0.5	Foods and Nutrition 4429A/B	Advanced Management for Foods and Nutrition
0.5	Foods and Nutrition 4453A/B	Clinical Nutrition II
0.5	Foods and Nutrition 4460A/B	Nutrition Counselling
0.5	Foods and Nutrition 4471A/B	Nutrition and Metabolic Processes
0.5	Elective	

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=20841&SelectedCalendar=Live&ArchiveID>

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APPENDIX 2B

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Honours Specialization in Foods and Nutrition,
and
Centennial College (Nutrition and Food Service Management diploma),
May 1, 2021

Course Requirements for Degree Completion Brescia Bachelor of Science (Foods and Nutrition) Honours Degree Program		
<u>Honours Specialization in Foods and Nutrition</u>		
To graduate from the BSc Honours Specialization in Foods and Nutrition degree program at Brescia, students admitted under this articulation agreement must successfully complete the 14.0 credits listed below. Brescia will provide Fanshawe with written notice of any changes to these course requirements. A final average of 75%, with no grade less than 60% must be achieved to graduate from the BSc (F&N) degree program.		
Credit Weight	Brescia/Western Course Number	Brescia/Western Course Name
Year 2 Requirements (Fall/Winter Term)		
0.5	Chemistry 1301A/B	Discovering Chemical Structure
0.5	Chemistry 1302A/B	Discovering Chemical Energetics
0.5	Biology 1290B	Biology and Microorganisms
1.0	Physiology 1021	Introduction to Human Physiology
0.5	Human Ecology 2222A/B	Professional Perspectives
0.5	Foods and Nutrition 1241 A/B	Lifecycle Nutrition
0.5	Foods and Nutrition 2266F/G	Nutrition Education and Communication
1.0	Elective	Breadth Requirement: Category "B" Arts and Humanities, or Languages
Year 3 Requirements (Fall/Winter Term)		
0.5	Biochemistry 2288A	Biochemistry and Molecular Biology for Foods and Nutrition
0.5	Chemistry 2003A/B	Organic and Biological Chemistry for Food Science
0.5	Foods and Nutrition 2230A/B	Integrated Human Nutrition
1.0	Foods and Nutrition 2232	Principles of Food Science
0.5	Foods and Nutrition 3361A/B	Fundamentals of Community Nutrition
2.0	Electives	(Consider choosing essay designated course to fulfill essay course requirements for graduation)
Year 4 Requirements (Fall/Winter Term – only 4.0 credits required for final year)		
0.5	Foods and Nutrition 3342A/B	Advanced Food Science
1.0	Foods and Nutrition 3390W/X	Research Methods and Statistics for Food and Nutrition
0.5	Foods and Nutrition 3380A/B, or	Policy Development and Advocacy
2.0	Food and Nutrition or Human Ecology 3000 or 4000 level	

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=21634&SelectedCalendar=Live&ArchiveID=>

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APPENDIX 2C

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Specialization in Foods and Nutrition,
and
Centennial College (Nutrition and Food Service Management diploma),
May 1, 2021

Course Requirements for Degree Completion Brescia Bachelor of Science (Foods and Nutrition) Honours Degree Program		
<u>Specialization in Foods and Nutrition</u>		
To graduate from the BSc Honours Specialization in Nutrition and Dietetics degree program at Brescia, students admitted under this articulation agreement must successfully complete the 14.0 courses listed below. Brescia will provide Fanshawe with written notice of any changes to these course requirements. A final average of 75%, with no grade less than 60% must be achieved to graduate from the BSc (F&N) degree program.		
Credit Weight	Brescia/Western Course Number	Brescia/Western Course Name
Year 2 Requirements (Fall/Winter Term)		
0.5	Chemistry 1301A/B	Discovering Chemical Structure
0.5	Chemistry 1302A/B	Discovering Chemical Energetics
0.5	Biology 1290B	Biology and Microorganisms
1.0	Physiology 1021	Introduction to Human Physiology
0.5	Human Ecology 2222A/B	Professional Perspectives
0.5	Foods and Nutrition 1241 A/B	Lifecycle Nutrition
0.5	Foods and Nutrition 2266F/G	Nutrition Education and Communication
1.0	Elective	Breadth Requirement: Category "B" Arts and Humanities, or Languages
Year 3 Requirements (Fall/Winter Term)		
0.5	Biochemistry 2288A	Biochemistry and Molecular Biology for Foods and Nutrition
0.5	Chemistry 2003A/B	Organic and Biological Chemistry for Food Science
0.5	Foods and Nutrition 2230A/B	Integrated Human Nutrition
1.0	Foods and Nutrition 2232	Principles of Food Science
1.0	Foods and Nutrition or Human Ecology at the 3000 or 4000-level	
1.5	Electives	(Consider choosing essay designated course to fulfill essay course requirements for graduation)
Year 4 Requirements (Fall/Winter Term – only 4.0 credits required for final year)		
0.5	Foods and Nutrition 3342A/B	Advanced Food Science
3.5	Foods and Nutrition or Human Ecology at the 3000 or 4000-level	

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ITEM 11.2(f)(ii) – Renewal of the Articulation Agreement for the Admission of Graduates of the Food Nutrition Management Program at Fanshawe College into the Bachelor of Science (Foods and Nutrition) Program at Brescia University College

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That Senate recommend to the Board of Governors, that effective May 1, 2021, graduates of the Food Nutrition Management Program at Fanshawe College be admitted to the Bachelor of Science (Foods and Nutrition) Program at Brescia University College (Honours Specialization in Nutrition and Dietetics, Honours Specialization in Foods and Nutrition, Specialization in Foods and Nutrition), as set out in the attached articulation agreement.

EXECUTIVE SUMMARY:

This agreement is a renewal that relates to students studying in the Fanshawe College Food Nutrition Management program. Effective May 1, 2021, Brescia University College proposes to accept students from this program into the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics program, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition program as set out in the attached Articulation Agreement between the two institutions.

The objectives of the agreement are to provide graduates from Fanshawe College, who satisfy the criteria described in this agreement, with the opportunity to apply for admission to the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics program, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition program and obtain a Western degree.

ATTACHMENT:

[Articulation Agreement](#)

AGREEMENT FOR OUTBOUND ARTICULATION

B E T W E E N:

FANSHAWE COLLEGE

1001 Fanshawe College Blvd, London ON N5Y 5R6

hereinafter referred to as "**Fanshawe**" of the first part.

-and-

BRESCIA UNIVERSITY COLLEGE

1285 Western Rd, London, ON N6G 1H2

hereinafter referred to as "**Brescia**" of the second part;

THIS AGREEMENT made this **June 2021**

ARTICULATION AGREEMENT

THIS AGREEMENT made BETWEEN:

THE UNIVERSITY OF WESTERN ONTARIO

(hereinafter called “Western”)

and

BRESCIA UNIVERSITY COLLEGE

(hereinafter called “Brescia”)

and

FANSHAWE COLLEGE

(hereinafter called “Fanshawe”)

WHEREAS Brescia, Western and Fanshawe wish to increase student mobility between Brescia, Western and Fanshawe, and the parties recognize that credit transfer is a key means to encourage such mobility;

AND WHEREAS the parties wish to facilitate the admission of qualified graduates of the Food and Nutrition Management program at Fanshawe to the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics program, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition program at Western/Brescia by entering into an articulation agreement recognized by the Ontario Council for Articulation and Transfer (ONCAT), and wish to set out clearly defined processes for the movement of the graduates between Fanshawe and Western and Fanshawe and Brescia;

NOW THEREFORE in consideration of the mutual covenants herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follow:

ADMISSION

1. Western and Brescia agree to consider for admission to the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition program graduates of the Food and Nutrition Management diploma program from Fanshawe who meet the following requirements:
 - a. Successful completion of the Food and Nutrition Management diploma with a competitive overall admission average for the year in which they apply as calculated by Western and Brescia;
 - b. Completion of the prescribed set of courses within the Food and Nutrition Management diploma with a minimum grade of “C” or 2.00 GPA in each college course as outlined in Appendix 1; and
 - c. Successful completion of Ontario Secondary School Biology (SBI4U) and Chemistry (SCH4U); or equivalent.

2. To be considered for admission, Fanshawe students must apply to Western or Brescia by June 1st of the year in which they are seeking admission.

3. Admissions decisions are within the sole discretion of Western and Brescia and are not appealable. Applicants who meet the requirements set out above are not guaranteed admission under this Agreement. The decision as to the number of students who will be accepted in any academic year may vary from year to year. Final determination of the validity of all admissions under this agreement rests with the Registrars at Western and Brescia in accordance with the provisions of the affiliation agreement between Western and Brescia.

TRANSFER CREDIT

4. Western and Brescia shall grant transfer credit to successful applicants for Fanshawe courses in accordance with **Appendix 1**.
5. The course names and numbers set out in **Appendix 1** may be revised from time to time with the agreement in writing of the parties. Failure to provide timely notification to Western and Brescia of changes to Fanshawe's course names or numbers may result in denial of admission and transfer credit to qualified applicants.
6. The parties acknowledge that the granting of transfer credit is based on an assessment of the Food and Nutrition Management diploma program curriculum and the courses as of the date of this Agreement. It is the responsibility of Fanshawe to notify Western and Brescia of any subsequent changes or anticipated changes to the curriculum or content of the courses and provide sufficient information to enable Western and Brescia to decide whether transfer credit will continue to be granted for these courses.

GENERAL

7. Students accepted under this Agreement must complete the courses set out in **Appendices 2A, 2B or 2C** and meet the progression and graduation requirements for a Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics (Appendix 2A), or Honours Specialization in Foods and Nutrition (Appendix 2B), or Specialization in Foods and Nutrition Program (Appendix 2C). These progression and degree requirements are subject to change during the term of this Agreement, and Western and Brescia will give Fanshawe written notice of any changes.
8. Students who subsequently fail to meet progression or degree requirements for the Bachelor of Science (Foods and Nutrition): Honours Specialization in Nutrition and Dietetics, or Honours Specialization in Foods and Nutrition, or Specialization in Foods and Nutrition Program but who do meet requirements for another program at Brescia or Western may be permitted to transfer to another program at the discretion of the relevant Faculty. Students who transfer to another program or campus may have the transfer credits removed from their academic record and credit for college courses may be re-assessed by the relevant Faculty.
9. Western and Brescia agree to provide Fanshawe students with information about the transfer credits and encourage qualified students to apply.
10. The parties shall each designate a program representative to assist with the operation of this Agreement. The program representatives and other relevant staff at each institution shall meet at least once every two years to review their processes and determine if changes are needed to meet the objectives of the parties.

TERM

11.(a) This Agreement is effective May 2021 and shall continue in force unless terminated by a party as set out herein.

(b) Any party may terminate this Agreement upon three months' written notice of termination to the other parties. No applicants will be considered for admission after the date of such notice.

(c) Notwithstanding paragraph (b), if Western or Brescia decide to terminate this Agreement due to changes to the Fanshawe's curriculum or course content, this Agreement shall terminate on a date that is the earlier of three months after written notice of termination is given to Fanshawe and the date that the changes were made by Fanshawe.

(d) Students accepted for admission under this Agreement prior to issuance of a notice of termination shall be permitted to complete their studies under the terms of this Agreement.

IN WITNESS WHEREOF the parties have executed this Agreement under the hands of their duly authorized officers.

FANSHAWE COLLEGE

*

Mr. Peter Devlin
President

Date

BRESCIA UNIVERSITY COLLEGE

*

Ms. Cheryl Jensen
Interim Principal

Date

THE UNIVERSITY OF WESTERN ONTARIO

*

Dr. John Doerksen
Vice-Provost (Academic Programs)

Date

*I have authority to bind the institution.

APPENDIX 1

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Honours Specialization in Nutrition and Dietetics, Honours
Specialization in Foods and Nutrition or Specialization in Foods in Nutrition
and
Fanshawe College (Food and Nutrition Management diploma),
May 2021

Western/Brescia Course	Western/Brescia Credit Weight	Fanshawe Course	Fanshawe Course Title	Fanshawe Credit Weight
Foods and Nutrition 1070A/B	0.5	NUTR-1011	The Science of Food & Nutrition	3.0
		NUTR-1012	Physiology & Normal Nutrition	2.0
		NUTR-1018	Nutrition - Intro	2.0
Foods and Nutrition 2249A/B	0.5	ACCT-1004	Principles of Accounting I	4.0
		HOSP-1013	Employee Relations	3.0
		FINA-3038	Finance for Food & Nutrition Management	3.0
		MGMT-3041	Marketing Nutrition	3.0
Writing 1020F/G	0.5	WRIT-1042	Reason & Writing I – Tourism & Hospitality	3.0
Foods and Nutrition 2100TRN	0.5	FMGM-1104	Basic Culinary Knowledge	3.0
Foods and Nutrition 2100TRN	1.0	NUTR-3004	Clinical Placement	4.8
		NUTR-1013	Clinical Documentation	2.0
		NUTR-1014	Therapeutic Nutrition	2.0
Foods and Nutrition 2130	1.0	FDMG-1113	Food Preparation 1	4.0
		FDMG-3043	Food Preparation 2	4.0
Foods and Nutrition 3348A/B and Foods and Nutrition 2100TRN	0.5 and 0.5	FDMG-5018	Auditing & Compliance	3.0
		FDMG-1064	Purchasing & Menu Planning	2.0
		SFTY-1067	Food Safety, Smart Serve, First Aid and WSA online	1.0
		FDMG-1060	Institutional Facility Design	3.0
Foods and Nutrition 3400A/B	0.5	NUTR-3006	Nutrition Screening	3.0
		ANTH-1002	The Anthropology of Modern Gastronomy	3.0

Total: 5.5 credits

APPENDIX 2A

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Honours Specialization in Nutrition and Dietetics,
and
Fanshawe College (Food and Nutrition Management diploma),
May 2021

Course Requirements for Degree Completion Brescia Bachelor of Science (Foods and Nutrition) Honours Degree Program		
<u>Honours Specialization in Nutrition and Dietetics</u>		
To graduate from the BSc Honours Specialization in Nutrition and Dietetics degree program at Brescia, students admitted under this articulation agreement must successfully complete the 14.0 courses listed below. Brescia will provide Fanshawe with written notice of any changes to these course requirements. A final average of 75%, with no grade less than 60% must be achieved to graduate from the BSc (F&N) degree program.		
Credit Weight	Brescia/Western Course Number	Brescia/Western Course Name
Year 2 Requirements (Fall/Winter Term)		
0.5	Chemistry 1301A/B	Discovering Chemical Structure
0.5	Chemistry 1302A/B	Discovering Chemical Energetics
0.5	Biology 1290B	Biology and Microorganisms
1.0	Physiology 1021	Introduction to Human Physiology
0.5	Human Ecology 2222A/B	Professional Perspectives
0.5	Foods and Nutrition 1241 A/B	Lifecycle Nutrition
0.5	Foods and Nutrition 2266F/G	Nutrition Education and Communication
0.5	Foods and Nutrition 3355A/B	Agriculture and Food Systems: Critical Conversations
0.5	Elective	Breadth Requirement: Category "B" Arts and Humanities, or Languages
Year 3 Requirements (Fall/Winter Term)		
0.5	Biochemistry 2288A	Biochemistry and Molecular Biology for Foods and Nutrition
0.5	Chemistry 2003A/B	Organic and Biological Chemistry for Food Science
0.5	Foods and Nutrition 2230A/B	Integrated Human Nutrition
1.0	Foods and Nutrition 2232	Principles of Food Science
0.5	Foods and Nutrition 3344A/B	Diet and Nutritional Assessment
0.5	Foods and Nutrition 3351A/B	Clinical Nutrition I
0.5	Foods and Nutrition 3361A/B	Fundamentals of Community Nutrition
1.0	Elective	(Consider choosing essay designated course to fulfill essay course requirements for graduation)
Year 4 Requirements (Fall/Winter Term – only 4.0 credits required for final year)		
0.5	Foods and Nutrition 3342A/B	Advanced Food Science
1.0	Foods and Nutrition 3390W/X	Research Methods and Statistics for Food and Nutrition
0.5	Foods and Nutrition 4429A/B	Advanced Management for Foods and Nutrition
0.5	Foods and Nutrition 4453A/B	Clinical Nutrition II
0.5	Foods and Nutrition 4460A/B	Nutrition Counselling
0.5	Foods and Nutrition 4471A/B	Nutrition and Metabolic Processes
0.5	Elective	

<https://www.westerncalendar.uwo.ca/Modules.cfm?ModuleID=20841&SelectedCalendar=Live&ArchiveID>

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APPENDIX 2B

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Honours Specialization in Foods and Nutrition,
and
Fanshawe College (Food and Nutrition Management diploma),
May 2021

Course Requirements for Degree Completion Brescia Bachelor of Science (Foods and Nutrition) Honours Degree Program		
<u>Honours Specialization in Foods and Nutrition</u>		
To graduate from the BSc Honours Specialization in Foods and Nutrition degree program at Brescia, students admitted under this articulation agreement must successfully complete the 14.0 credits listed below. Brescia will provide Fanshawe with written notice of any changes to these course requirements. A final average of 75%, with no grade less than 60% must be achieved to graduate from the BSc (F&N) degree program.		
Credit Weight	Brescia/Western Course Number	Brescia/Western Course Name
Year 2 Requirements (Fall/Winter Term)		
0.5	Chemistry 1301A/B	Discovering Chemical Structure
0.5	Chemistry 1302A/B	Discovering Chemical Energetics
0.5	Biology 1290B	Biology and Microorganisms
1.0	Physiology 1021	Introduction to Human Physiology
0.5	Human Ecology 2222A/B	Professional Perspectives
0.5	Foods and Nutrition 1241 A/B	Lifecycle Nutrition
0.5	Foods and Nutrition 2266F/G	Nutrition Education and Communication
1.0	Elective	Breadth Requirement: Category "B" Arts and Humanities, or Languages
Year 3 Requirements (Fall/Winter Term)		
0.5	Biochemistry 2288A	Biochemistry and Molecular Biology for Foods and Nutrition
0.5	Chemistry 2003A/B	Organic and Biological Chemistry for Food Science
0.5	Foods and Nutrition 2230A/B	Integrated Human Nutrition
1.0	Foods and Nutrition 2232	Principles of Food Science
0.5	Foods and Nutrition 3361A/B	Fundamentals of Community Nutrition
2.0	Electives	(Consider choosing essay designated course to fulfill essay course requirements for graduation)
Year 4 Requirements (Fall/Winter Term – only 4.0 credits required for final year)		
0.5	Foods and Nutrition 3342A/B	Advanced Food Science
1.0	Foods and Nutrition 3390W/X	Research Methods and Statistics for Food and Nutrition
0.5	Foods and Nutrition 3380A/B, or	Policy Development and Advocacy
2.0	Food and Nutrition or Human Ecology 3000 or 4000 level	

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APPENDIX 2C

Articulation Agreement between
The University of Western Ontario and Brescia University College's
Bachelor of Science (Foods and Nutrition), Specialization in Foods and Nutrition,
and
Fanshawe College (Food and Nutrition Management diploma),
May 2021

Course Requirements for Degree Completion Brescia Bachelor of Science (Foods and Nutrition) Honours Degree Program		
<u>Specialization in Foods and Nutrition</u>		
To graduate from the BSc Honours Specialization in Nutrition and Dietetics degree program at Brescia, students admitted under this articulation agreement must successfully complete the 14.0 courses listed below. Brescia will provide Fanshawe with written notice of any changes to these course requirements. A final average of 75%, with no grade less than 60% must be achieved to graduate from the BSc (F&N) degree program.		
Credit Weight	Brescia/Western Course Number	Brescia/Western Course Name
Year 2 Requirements (Fall/Winter Term)		
0.5	Chemistry 1301A/B	Discovering Chemical Structure
0.5	Chemistry 1302A/B	Discovering Chemical Energetics
0.5	Biology 1290B	Biology and Microorganisms
1.0	Physiology 1021	Introduction to Human Physiology
0.5	Human Ecology 2222A/B	Professional Perspectives
0.5	Foods and Nutrition 1241 A/B	Lifecycle Nutrition
0.5	Foods and Nutrition 2266F/G	Nutrition Education and Communication
1.0	Elective	Breadth Requirement: Category "B" Arts and Humanities, or Languages
Year 3 Requirements (Fall/Winter Term)		
0.5	Biochemistry 2288A	Biochemistry and Molecular Biology for Foods and Nutrition
0.5	Chemistry 2003A/B	Organic and Biological Chemistry for Food Science
0.5	Foods and Nutrition 2230A/B	Integrated Human Nutrition
1.0	Foods and Nutrition 2232	Principles of Food Science
1.0	Foods and Nutrition or Human Ecology at the 3000 or 4000-level	
1.5	Electives	(Consider choosing essay designated course to fulfill essay course requirements for graduation)
Year 4 Requirements (Fall/Winter Term – only 4.0 credits required for final year)		
0.5	Foods and Nutrition 3342A/B	Advanced Food Science
3.5	Foods and Nutrition or Human Ecology at the 3000 or 4000-level	

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ITEM 11.2(g) – Report of the Subcommittee on Program Review – Undergraduate (SUPR-U): Cyclical Reviews of the Bachelor of Education Program and the Undergraduate Programs in Film Studies and Health Studies

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

On behalf of the Senate, SCAPA approved the recommendations of the Subcommittee on Program Review – Undergraduate (SUPR-U) with respect to the cyclical reviews of the Bachelor of Education program and the undergraduate programs in Film Studies and Health Studies.

Faculty/Affiliate	Program	Date of Review	SUPR-U recommendation
Education	Bachelor of Education	March 1-2, 2021	Good Quality with Report in Three Years
Arts and Humanities	Film Studies	January 14-15, 2021	Good Quality with Report in Two Years
Health Sciences	Health Studies	March 10-11, 2021	Good Quality with Report in Two Years

The detailed Final Assessment Reports and Implementation Plans for these reviews are attached.

ATTACHMENTS:

[Final Assessment Report – Bachelor of Education](#)

[Final Assessment Report – Film Studies](#)

[Final Assessment Report – Health Studies](#)



Bachelor of Education

Final Assessment Report & Implementation Plan

Faculty / Affiliated University College	Faculty of Education, Western University
Degrees Offered	Bachelor of Education
Modules Reviewed	Primary-Junior, Junior-Intermediate & Intermediate-Senior Teacher Education Programs
External Consultants	Dr. Maria Cantalini-Williams (Wilfrid Laurier University) Dr. Rebecca Luce Kapler (Queens University)
Internal Reviewer	Dr. Susan Knabe (FIMS)
Date of Site Visit	March 1-2, 2021
Evaluation	Good Quality with Report in Three Years
Approval Dates	SUPR-U: May 12, 2021 SCAPA: May 19, 2021 Senate (for information only): June 11, 2021
Year of Next Review	Year of next cyclical review – 2027-28

Overview of Western’s Cyclical Review Assessment Reporting Process

In accordance with Western’s Institutional Quality Assurance Process (IQAP), the Final Assessment Report (FAR) provides a summary of the cyclical review, internal responses, and assessment and evaluation of the undergraduate preservice programs delivered by the **Faculty of Education**.

This report considers and reports on the following documents: the program’s self-study, the external consultants’ report, and the responses from the Department and the Associate Dean of Science.

This Final Assessment Report (FAR):

- i) provides an Executive Summary of the Review Process, including an overview of the Department as outlined in the Self-Study brief;
- ii) identifies the strengths of the program;
- iii) identifies opportunities for program enhancement and improvement; and,
- iv) prioritizes the recommendations of the external consultants in the Implementation Plan.

The Implementation Plan details the recommendations from the Final Assessment Report that are required for implementation, identifies who is responsible for approving and acting on the recommendations, outlines any action or follow-up that is required, and provides the timeline for completion.

The Final Assessment Report and Implementation Plan is sent for approval through SUPR-U, SCAPA, Senate and the Ontario Universities’ Council on Quality Assurance and is made available on a publicly accessible location on Western’s IQAP website. The Final Assessment Report with the Implementation Plan is the only document resulting from the undergraduate cyclical review process that is made public; all other documents are confidential to the Program/School/Faculty and SUPR-U.

Executive Summary (as identified in the Self-Study Brief)

Overview

Western's Faculty of Education has been offering preservice teacher education programs in elementary and secondary education since 1965. Diplomas in Education were issued to its graduates. The Bachelor of Education degree was instituted for all graduates beginning in 1975 in three certification areas: Primary-Junior, Junior-Intermediate, and Intermediate-Senior teacher education.

Western's Teacher Education program prepares new teachers who:

- *support the education, development, and nurturance of learners of different ages and backgrounds, in different kinds of educational settings, and in local, national, and international communities*
- *engage in reflective, critical, research-informed practice and on-going learning; and to*
- *advance education, strengthen schools, challenge social injustices, lead, and transform lives.*

The program values:

- *academic excellence, reason, critical thought, autonomous & on-going learning (habits of mind)*
- *integrity, passion, courage, care, empathy, and respect for diversity (habits of heart)*
- *willingness to teach, challenge, serve, lead, and transform (habits of hand).*

Traditionally a one-year program, the Ontario government extended teacher programs to two years in 2015 and cut the entering enrolment in half (from 700 to 340) accompanied by an additional 30% reduction in grants which has had a significant, negative budgetary impact.

The curriculum of the programs aligns with Western's Strategic Plan and Western's Learning Outcomes as well as the Standards of the Profession of the Ontario College of Teachers.

Strengths/Innovations of the Program (as identified in the Self-Study brief)

- Indigenous Initiatives, including the Office of Indigenous Education, indigenization of curriculum, and inclusion of new indigenous space as part of the Faculty of Education physical facilities
- Internships & Alternative Field Experiences for teacher candidates
- Development of Virtual Learning Platforms (with teacher candidates hired as interns)
- Community practica
- Transition to Practice non-credit course
- Development of Embodied Learning program
- Peer Mentorship Program
- Retired Teacher Mentor Buddies
- Learning Supports Hub
- Seven Specialized Research Centres within the Faculty of Education
- IB Educator Certificate Programs
- Administrative staff

- Student services related to employment, professional development, community resources, peer coaching, education student council, library and IT supports
- Accreditation by Ontario College of Teachers in 2019

Challenges (as identified in the brief)

- Resources to involve fulltime, tenured faculty in B.Ed. program
- Arts education
- Maintaining and constantly updating a curriculum that responds to new pedagogical, social, political, and technological urgent mandates

Recent Changes (as identified in the brief)

- Implementation of:
 - Mental Healthy Literacy Course
 - Model classrooms for early childhood, elementary, and maker spaces
- Improvements in programs in
 - Cultural Relevance
 - New knowledge; pedagogical and assessment practices; technological knowledge and application
- Improved community engagement and representation

Changes under development in the Department (as noted in the Brief)

- Development of Curriculum Innovation Framework
- Preliminary use of CourseTune and CASPer software to address concerns with curriculum/assessment overlap and diversifying admission profile, respectively

Self-Study Process

In preparing for this review, the Faculty was involved in extensive collection and analysis of quantitative and qualitative data from current students, alumni, the profession, the community, professional advisory groups, and through faculty meetings. In addition, the Faculty included information related to the professional accreditation and certification in 2019 by the Ontario College of Teachers.

Review Process

The external review committee (comprised of the two external reviewers and one internal reviewer) was provided with Volumes I and II in advance of their visit and then (due to pandemic restrictions) met online with the following over the course of the two days.

- Dr. John Doerksen, Vice Provost, Academic Programs
- Dr. Margaret McGlynn, Acting Vice-Provost of Academic Planning Policy and Faculty
- Dr. Donna Kotsopoulos, Dean, Faculty of Education
- Teacher Education Faculty
- Teacher Candidates & Student Advisory Group

- Master Teacher Mentors
- School District and Community Advisory Council
- Practicum Consultants
- Faculty Program Coordinators
- Associate Teachers
- Teacher Education Design Team
- Anna Zuber, Administrative Staff
- Roxanne Isard, Education Librarian

The review also included a virtual tour of the facilities.

Following the formal review, the external reviewers submitted a comprehensive report of their findings which was sent to the Associate Dean, Preservice and the Dean for review and response. These formative documents, including Volumes I and II of the Self-Study, the External Report, and the Faculty response, have formed the basis of this summative assessment report of the Faculty of Education's B. Ed. Program.

Summative Assessment – External Reviewers' Report

The external reviewers note that:

We were impressed by the strong level of research and reflection in the teacher education program that is part of the culture of that program. Arising from this evidence-based practice are a number of innovative initiatives.

Strengths of the Program

- evidence-based practice
- innovative initiatives such as the Master Teacher Mentors, the Alternative Field Experiences, and the Transition to Profession (T2P) practice
- strong partnerships with colleges and school boards
- teacher candidate satisfaction with the program
- progressive and professional Teacher Education Team
- important work with Indigenous communities, summer programs, developing curriculum content, and hiring Indigenous faculty
- creation of an Indigenous Learning Space
- ability to pivot quickly to online learning due to challenges of the pandemic

Challenges for the Program

- lack of tenure-stream and FT faculty teaching in the program poses a challenge to a strong research orientation
- Equity, Diversity and Inclusion initiatives

Reviewers’ Recommendations and Department/Faculty Responses

REVIEWERS’ RECOMMENDATIONS	DECANAL/DEPARTMENT RESPONSE
<p>1. <i>Clarify the mandate of the Teacher Education Design Team and use its expertise to inform the ongoing reflection and improvement of the Bachelor of Education program as it works toward the Curriculum Innovation Framework.</i></p>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ The Teacher Education Design group (TED) and the Curriculum Innovation Framework, while complementary, have different functions which will be clarified ○ Recommendations in this review are applicable to and will be implemented by the TED <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Clarification underway using OWL technology
<p>2. <i>Review communications and materials, including handbooks, to ensure that terminology and roles are clearly defined, the overall structure of the program is clearly outlined, and that the website homepage has easy access to this information.</i></p>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Underway and to be addressed by Fall 2021 <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Underway – as a result of recent website changes undertaken in 2019 during which it was streamlined with a recruitment focus, some materials for current students were lost; these gaps have been identified and are being remediated
<p>3. <i>Review the structure of the B.Ed. admission pathways. Consider creating targeted pathways for underrepresented groups such as a Promise Scholars program that is specifically created for under-represented consecutive B.Ed. applicants.</i></p>	<p><u>Dean:</u> underway</p> <ul style="list-style-type: none"> ○ Equity Committee established in 2020 to review applications from students who identify ○ No restrictions on number of admissions (45/52 accepted in 2020) ○ We continue to ensure equitable admissions’ process is in place <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ In discussion with Director, Indigenous Office re: enhancing Indigenous admissions pathway ▪ Ongoing commitment to meet strategic priorities related to Indigenous Education, including adding one dedicated staff member (Indigenous Coordinator) and four full-time faculty appointments in Indigenous Education ▪ Work within existing and proposed university initiatives (Indigenous Strat Plan; proposed

	<p>AVP EDI) to support building student diversity across the program</p> <ul style="list-style-type: none"> ▪ Review and continued attention to processes underway including piloting CASPer software
<p>4. <i>Give priority to resources to increase the number of tenure-stream and full-time instructors in the B.Ed. program.</i></p>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Agreed – impacted by budget cuts ○ Plans in place to advocate for faculty renewal in the next few years to address this issue <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Agreed ▪ Need representation in 6 identified key areas of the curriculum
<p>5. <i>Create a template for syllabi that includes the features and frameworks of the program so they are visible to teacher candidates and instructors; e.g., the OCT standards of practice, UDL, equity statements, etc. Instructors could then add their content and indicate appropriate linkages to the framework.</i></p>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Underway ○ Using OWL and Coursetune technologies <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ A template already exists (developed in 2019) ▪ Further refinements ongoing (including thro' Curriculum Innovation Framework)
<p>6. <i>Continue to evaluate the strengths and weaknesses of the Pass/Fail assessment system for unintended consequences and outcomes.</i></p>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Ongoing research and review in place <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Grant received to ensure there is funding for programmatic research, including the P/F process
<p>7. <i>Review Equity, Diversity, and Inclusion, and Indigenous curriculum with the aim to improve learning opportunities for teacher candidates and to enhance the anti-racist and decolonizing work in the Faculty.</i></p>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Curriculum Innovation Framework and Equity Committee are undertaking this work ○ Anticipate engagement with Indigenous Education Office <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Curriculum Innovation Framework designed specifically to address this issue ▪ Integrity module, including teaching on anti-racism and decolonizing pedagogies, currently in development (in collaboration with marginalized

	groups); this module will be required of all students entering the program and used in orienting Teacher Educators
8. <i>Within the more flexible framework of Pass/Fail grading, explore opportunities for more innovative assessments while ensuring good communication about the variety, number, and timing of assignments being given across the program.</i>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ underway ○ See # 6 above <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Using Coursetune and Curriculum Innovation Framework to monitor and ensure assignments and assessment processes are appropriate
9. <i>Clarify the evaluation criteria of the practicum by the Practicum Consultant and include the specific form/template in the Practicum Handbook.</i>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Completed <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Significant changes occurred quickly this year due to the changes required by the pandemic that were not reflected in the extant Practicum Handbook; unclear at this time if these changes will need to be included going forward or will be confined to a Covid response
10. <i>Continue to support Limited Duties instructors and Graduate Student Teaching Assistants with opportunities for professional development and familiarization with current program expectations.</i>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Ongoing <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ Annual workshops and regular meetings in place ▪ Virtual Orientation provided to all LD instructors ▪ Weekly drop-ins hosted by Instructional Design team to support online curriculum development ▪ Ongoing review of how best to accommodate this with large group that changes annually
11. <i>Implement the use of an electronic management system to document and store Practicum Placement information and forms for various stakeholder groups.</i>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ▪ Implementation of Salesforce CRM is imminent <p><u>Program Response:</u></p> <ul style="list-style-type: none"> ▪ See above
12. <i>Review number of Practicum Consultant visits and consider strengthening the relationship between consultants and the teacher candidates that they supervise.</i>	<p><u>Dean:</u></p> <ul style="list-style-type: none"> ○ Review is underway, noting the strengths that have been realized through the online learning platforms <p><u>Programs Response:</u></p> <ul style="list-style-type: none"> ▪ Impacted by loss of funding for Practicum

	<p>Consultants and large number of boards the program partners with across the province (44)</p> <ul style="list-style-type: none">▪ Plans to merge Master Teacher Mentor role and Practicum Consultant role to help mitigate the above concern
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Other Opportunities for Program Improvement and Enhancement

The above recommendations capture the substantial suggestions made by the reviewers for the enhancement of the program.

Implementation Plan

The Implementation Plan provides a summary of the recommendations that require action and/or follow-up. The Department Chair/Director, in consultation with the Dean of the Faculty/Affiliated University College Principal will be responsible for monitoring the Implementation Plan. The details of progress made will be presented in the Deans’ Annual Report and filed in the Office of the Vice-Provost (Academic).

Recommendation	Proposed Action and Follow-up	Responsibility	Timeline
1. Review the structure of the B.Ed. admission pathways.	Continued attention to admission processes underway to increase diversity (involving Equity Committee; piloting CASPer software) Discussion with Director, Indigenous Office re: enhancing Indigenous admissions pathway	Associate Dean; Equity Committee; Director, Office of Indigenous Education	Ongoing; CASPer pilot ongoing with suitability review at the end of the current pilot (summer 2021)
2. Give priority to resources to increase the number of tenure-stream and full-time instructors in the B.Ed. program.	Advocate for faculty renewal in the next few years; specific attention to 6 identified key areas of the curriculum	Dean; Associate Dean	Ongoing
3. Review number of Practicum Consultant visits and consider strengthening the relationship between consultants and the teacher candidates that they supervise.	Assess whether Practicum Consultant role could be subsumed in the Master Teacher Mentor role	Associate Dean; Teacher Education Design group (TED)	Ongoing
4. Continue to evaluate the strengths and weaknesses of the Pass/Fail assessment system for unintended	APF funded annual programmatic research will allow monitoring of pedagogical innovations, including P/F assessment and enable contribution to	Associate Dean; TED	Ongoing

consequences and outcomes.	extant research on Teacher Education		
5. Review Equity, Diversity, and Inclusion, and Indigenous curriculum with the aim to improve learning opportunities for teacher candidates and to enhance the anti-racist and decolonizing work in the Faculty.	<p>Curriculum Innovation Framework (CIF) to ensure EDI-D is central to Teacher Education</p> <p>Ongoing involvement of Office of Indigenous Education</p> <p>Development of Integrity Module which includes anti-racism and decolonizing pedagogies</p>	Associate Dean, CIF Committee; TED; Equity Committee; Director, Office of Indigenous Education; faculty members involved in Indigenous Education	CIF involvement is ongoing; Integrity Module to be launched in Fall 2021
6. Explore opportunities for more innovative assessments while ensuring good communication about the variety, number, and timing of assignments being given across the program	<p>CourseTune has been introduced this year to monitor and map curriculum and courses by tracking assignments and assessment processes level</p> <p>Curriculum Innovation Framework will help ensure assignments and assessment processes are appropriate</p> <p>Refine extant syllabus template</p>	Associate Dean, TED; Curriculum Innovation Framework Committee	Ongoing
7. Review communications and materials, including handbooks, to ensure that terminology and roles are clearly defined, the overall structure of the program is clearly outlined, and that the website homepage has easy access to this information	Identify and remediate website to return documents and pages integral to the operation of the program for current students	Associate Dean, TED	Summer 2021



Film Studies

Final Assessment Report & Implementation Plan

Faculty / Affiliated University College	Department of English and Writing Studies, Faculty of Arts & Humanities, Western University
Degrees Offered	Bachelor of Arts
Modules Reviewed	Honours Specialization in Film Studies Specialization in Film Studies Major in Film Studies
External Consultants	Dr. Paul Moore, Associate Professor, Ryerson University Dr. Gunnar Iversen, Professor, Carleton University
Internal Reviewer	Dr. John D. Cuciurean, Faculty of Music, Western University
Date of Site Visit	January 14-15, 2021
Evaluation	Good Quality with Report in Two Years
Approval Dates	SUPR-U: May 12, 2021 SCAPA: May 19, 2021 Senate (for information only): June 11, 2021
Year of Next Review	Year of next cyclical review – 2027-28

Overview of Western’s Cyclical Review Assessment Reporting Process

In accordance with Western’s Institutional Quality Assurance Process (IQAP), the Final Assessment Report (FAR) provides a summary of the cyclical review, internal responses, and assessment and evaluation of the undergraduate Film Studies program delivered by the Faculty of Arts and Humanities.

This report considers and reports on the following documents: the program’s self-study, the external consultants’ report, and the responses from the Department and the Associate Dean of Science.

This Final Assessment Report (FAR):

- i) provides an Executive Summary of the Review Process, including an overview of the Department as outlined in the Self-Study brief;
- ii) identifies the strengths of the program;
- iii) identifies opportunities for program enhancement and improvement; and,
- iv) prioritizes the recommendations of the external consultants in the Implementation Plan.

The Implementation Plan details the recommendations from the Final Assessment Report that are required for implementation, identifies who is responsible for approving and acting on the recommendations, outlines any action or follow-up that is required, and provides the timeline for completion.

The Final Assessment Report and Implementation Plan is sent for approval through SUPR-U, SCAPA, Senate and the Ontario Universities’ Council on Quality Assurance and is made available on a publicly accessible location on Western’s IQAP website. The Final Assessment Report with the Implementation Plan is the only document resulting from the undergraduate cyclical review process that is made public; all other documents are confidential to the Program/School/Faculty and SUPR-U.

Executive Summary (as identified in the Self-Study Brief)

Overview

Western University has been offering undergraduate degrees in Film Studies since 1975, first through the Department of English Language and Literature (1975-2006), and then through the Department of Film Studies (2006-2016). In 2016, its department structure was dissolved due to declining enrolments (30% over the past 10 years) and budgetary pressures, and it became one of four programs within the Department of English and Writing Studies in the Faculty of Arts and Humanities.

Film Studies, led by a Program Director, has five fulltime faculty members, two fulltime faculty from other departments, as well as some limited duties faculty. It continues to offer a range of courses across its five modules and collaborates with Visual Arts, Media Studies, Women's Studies and Feminist Research, Modern Languages and Literatures, the School for Advanced Studies in the Arts and Humanities, and others.

Film Studies prepares students to take on these roles in global leadership and the public good. Our courses teach students to become critical readers of film and related emerging media, and to communicate skillfully and professionally about these media. The program's offerings are grounded in the study of a globalized political economy of the production and distribution of national, transnational, regional, postcolonial and diasporic cinemas and their relations to gender, sexuality, class, and race. Film Studies at Western thus traverses a varied and dynamic terrain from local film cultures to global blockbusters with stops in the avant-garde, documentary, auteur, and genre studies.

Both faculty and students have been recognized with awards of excellence and graduates have enjoyed gainful employment in various facets of the industry. As part of experiential learning, interns have found placements with community partners such as the Toronto International Film Festival, Warner Bros, Forest City Film Festival, Museum London.

Learning Outcomes and the curriculum have been recently revised and are consistent with the Quality Assurance Framework of Ontario, the Western Degree Outcomes, and those of the Department of English and Writing Studies.

Strengths/Innovations of the Program (as identified in the Self-Study brief)

- collaboration with other programs
- excellence in teaching
- innovative course designs, such as Horror, Dystopia, and Disney
- opportunity to test film theory with practice in production courses and courses with production components
- resources through partnerships
- increase in enrolment due to popular introductory course, Film 1022, open to all students
- employment opportunities for graduates

Challenges (as identified in the brief)

- Recent change from Department of Film Studies to a program within the Department of English and Writing Studies with compression of courses, faculty, and staff
- Loss of 16mm projection booth in renovations to University College
- Declining enrolments as experienced across the North American landscape

Recent Changes (as identified in the brief)

- Change from departmental structure to being one of four programs in English and Writing Studies
- Revision of Learning Outcomes
- Curriculum review and reform

Changes under Consideration (as noted in the Brief)

- Continuing curriculum reform
- Improving communication with the Department Chair and other Chairs re course offerings
- Engaging other departmental faculty in contributing to courses
- Exploring cross-listing more Film courses with other departments
- Exploring inclusion in the Creative Arts and Production program (currently in planning process with three faculties)
- Introducing a service-learning course

Self-Study Process

In preparing for this review, the Film Studies Program reviewed data on course enrolments and was involved in extensive collection and analysis of quantitative and qualitative data from current students, alumni, and town hall meetings. It also drew on the findings from an extensive review completed in 2016 during the transition from department to program

Onsite Review by External Consultants

The external review committee (comprised of the two external reviewers and one internal reviewer) was provided with Volumes I and II in advance of their visit and then (due to pandemic restrictions) met online with the following over the course of the two days.

- Dr. John Doerksen, Vice Provost, Academic Programs
- Dr. Margaret McGlynn, Vice-Provost of Academic Planning Policy and Faculty
- Dr. Michael Milde, Dean, Faculty of Arts & Humanities

- Dr. Tracy Isaacs, Associate Dean (Academic), Faculty of Arts & Humanities
- Dr. Christopher Keep, Film Studies Program Director
- Dr. Manina Jones, Chair, English and Writing Studies
- Film Studies Faculty
- Faculty from other units who teach in the program
- Film Studies Undergraduate Studies
- Administrative Staff
- D. McCord, Librarian and R. Glushko, Associate Chief Librarian

Following the formal review, the external reviewers submitted a comprehensive report of their findings which was sent to Program Director and the Dean for review and response. These formative documents, including Volumes I and II of the Self-Study, the External Report, and the Faculty response, have formed the basis of this summative assessment report of the Film Studies undergraduate program.

Summative Assessment – External Reviewers’ Report

Strengths of the Program

- Robust Major and Minor modules
- Dedicated teachers who inspire their students: *clear evidence of generally excellent teaching delivery and assessment*
- Flexible faculty open to change and adaptation
- Strong students showing high level of admissions, academic achievement, graduation rates and satisfaction through course evaluations

Challenges for the Program

- Specialization in Film seems stretched beyond capacity of current resources
- Attracting more students (acknowledging that this is national concern)
- Expanding community-based learning
- Adding more production courses

Reviewers’ Recommendations and Program/Faculty Responses

Note bene: The Reviewers included 12 recommendations/suggestions in their report, following the order of the template for the report. The Program, however, grouped its response according to the theme and utility going forward with which the decanal report aligned.

REVIEWERS’ RECOMMENDATIONS	PROGRAM/DECANAL RESPONSE
1. <i>Strategically expand options for community-based experiential learning.</i>	<p><u>Program:</u></p> <p>Members of the Program met in a Town Hall to discuss the external report and are moving immediately forward with Recommendations 1, 5, 6, 7, 10 and 11.</p> <p><u>Dean:</u></p> <p>Recommendations #1, 5, 6, 7, 10 and 11 are welcome recommendations and the Faculty is supportive of the Program in implementing these.</p>
5. <i>Clarify expectations and planning for Fourth-year capstones.</i>	
6. <i>We recommend that the faculty consider the possibility of adding one more production course, to meet student interest.</i>	
7. <i>We recommend film studies should explore establishing partnerships for the internship course.</i>	
10. <i>Plan strategically for audio-visual creation literacy within the Program.</i>	
11. <i>Facilitate options for post-graduate or co-curricular experience in production.</i>	<p><u>Department:</u></p> <p>With respect to Recommendations #2 and #8, the Program feels that it currently meets these standards but given the limitations of the required virtual visit that these aspects may not have been clearly exposed or discussed.</p> <p><u>Dean:</u></p> <p>Recommendations #2 and 8 are covered in the curriculum but may not have been fully obvious or visible during the online visit</p>
2. <i>Attend more carefully to current disciplinary context of “global diversity.”</i>	
8. <i>Facilitate options for studying a global diversity of cultures.</i>	<p><u>Department:</u></p> <p>Recommendations 3, 4, 9 and 12 are deemed outside the purview of the IQAP process as they</p>
3. <i>Attend more carefully to current disciplinary context of “industrial, cultural and technological basis” of a breadth of audio-visual media.</i>	

<p>4. <i>a) Reform delivery of Intro full-year course for diversity of perspectives.</i></p> <p><i>b) We further recommend the first 0.5 credit introductory course be ‘An introduction to audio-visual media’, incorporating more emphasis on TV and new digital media, and the second 0.5 credit introductory course be a ‘world cinema’ or ‘global cinema’, exploring global diversity of cinematic forms.</i></p>	<p>reflect in some cases media studies rather than film studies.</p> <p><u>Dean:</u></p> <p>Recommendations #3, 4, 9 and 12 refer to expanding and broadening the media component which is covered by the Media Studies program in the Faculty of Information and Media Studies. Discussions are underway about the development of a Creative Arts and Production Program that would address this rather than have Film Studies duplicate course offerings.</p>
<p>9. <i>The Program should facilitate clear pathways for its students to pursue the study of audio-visual media beyond film, in Film courses but also beyond the program.</i></p>	
<p>12. <i>Protect classroom screenings in Program delivery at all levels.</i></p>	

Implementation Plan

The Implementation Plan provides a summary of the recommendations that require action and/or follow-up. The Department Chair/Director, in consultation with the Dean of the Faculty/Affiliated University College Principal will be responsible for monitoring the Implementation Plan. The details of progress made will be presented in the Deans’ Annual Report and filed in the Office of the Vice-Provost (Academic).

Recommendation	Proposed Action and Follow-up	Responsibility	Timeline
1. Strategically expand options for community-based experiential learning.	Program should entrench community-based events and routines for experiential learning as a carefully planned aspect of the curriculum.	Director of Film Studies Program	Fall 2021 through Winter 2024
2. i) Clarify expectations and planning for Fourth-year capstone courses (FILM 4409E & FILM 4495F/G). ii) Explore establishing partnerships for the internship course (FILM 4495F/G).	a) Clearly define the expected number of pages and scope of the BA thesis (FILM4409E), communicate this on the department webpage, and explicitly differentiate the thesis scope from that of an MA thesis. b) Create clear instructions of what an internship course (FILM4495F/G) application looks like. c) Provide a fair and transparent process of supervisor assignment for both thesis and internship supervision.	Director of Film Studies Program	Fall 2021 through Winter 2024
3. Create additional option for study of film production.	Consider adding one more production course, to meet student interest, with the possibility of a course in screenwriting in collaboration with English.	Chair, Department of English and Writing Studies, and Director of Film Studies Program	Fall 2021 through Winter 2024

4. Plan strategically for audio-visual creation literacy within the Program.	Carefully plan to include creative audio-visual literacy alongside reading and writing as fundamental critical skills, across the curriculum’s teaching and assessments.	Director of Film Studies Program	Fall 2021 through Winter 2024
5. Facilitate options for post-graduate or co-curricular experience in film production.	Provide clear pathways for students to pursue post-graduate training, graduate studies, and “double majors” elsewhere (eg. the new Creative Arts Production major) to fully develop careers in creative audio-visual production.	Director of Film Studies Program	Fall 2021 through Winter 2024



Health Studies

Final Assessment Report & Implementation Plan

Faculty / Affiliated University College	Faculty of Health Sciences, Western University
Degrees Offered	Bachelor of Health Science (BHSc) Honours Specialization in Health Sciences BSc (Hons) with Honours Business Administration (HBA)
Modules Reviewed	Honours Specializations: Health and Aging Health Promotion Health Sciences with Biology Rehabilitation Sciences Specialization: Health Sciences Majors: Health Sciences Rehabilitation Sciences
External Consultants	Dr. Stacey Ritz, BHSc Program McMaster University Dr. Robb Travers, Wilfrid Laurier University
Internal Reviewer	Dr. Tracy Isaacs, Faculty of Arts and Humanities
Date of Site Visit	March 10-11, 2021
Evaluation	Good Quality with Report in Two Years
Approval Dates	SUPR-U: May 12, 2021 SCAPA: May 19, 2021 Senate (for information only): June 11, 2021
Year of Next Review	Year of next cyclical review – 2027-28

Overview of Western’s Cyclical Review Assessment Reporting Process

In accordance with Western’s Institutional Quality Assurance Process (IQAP), the Final Assessment Report (FAR) provides a summary of the cyclical review, internal responses, and assessment and evaluation of the undergraduate programs delivered by the **School of Health Studies** in the **Faculty of Health Sciences**.

This report considers and reports on the following documents: the program’s self-study, the external consultants’ report, and the responses from the Department and the Associate Dean of Science.

This Final Assessment Report (FAR):

- i) provides an Executive Summary of the Review Process, including an overview of the Department as outlined in the Self-Study brief;
- ii) identifies the strengths of the program;
- iii) identifies opportunities for program enhancement and improvement; and,
- iv) prioritizes the recommendations of the external consultants in the Implementation Plan.

The Implementation Plan details the recommendations from the Final Assessment Report that are required for implementation, identifies who is responsible for approving and acting on the recommendations, outlines any action or follow-up that is required, and provides the timeline for completion.

The Final Assessment Report and Implementation Plan is sent for approval through SUPR-U, SCAPA, Senate and the Ontario Universities’ Council on Quality Assurance and is made available on a publicly accessible location on Western’s IQAP website. The Final Assessment Report with the Implementation Plan is the only document resulting from the undergraduate cyclical review process that is made public; all other documents are confidential to the Program/School/Faculty and SUPR-U.

Executive Summary (as identified in the Self-Study Brief)

Overview

With 1500 fulltime undergraduate students, the School of Health Studies is one of three undergraduate programs within the Faculty of Health Sciences, along with Nursing and Kinesiology. There are 17 full time faculty members with 12 appointed in the School of Health Studies, five joint appointments in Kinesiology, Law, Medicine, Public Health, Philosophy, and Women's Studies, and several limited duties instructors. The School also has two Academic Counsellors, an Academic Counselling Assistant, an Undergraduate Assistant, and an Experiential Learning and Placement Coordinator.

The curriculum has been designed such that students take a common first year of foundational studies and then can mix and match electives offered in the School to design an undergraduate program specific to their academic interests. Admission standards for its programs are highly competitive and several students have held major awards, including a Fullbright-Killam Scholarship and a Rhodes Scholar. While a significant number of Health Studies graduates go on to graduate study in professional or research programs, many find employment in the private or public sectors, occupying positions such as health policy analysts, public health managers, public health inspectors, community health promoters/health promotion officers, health program evaluation specialists, workplace health consultants, pharmaceutical salespersons, resource management policy analysts and health human resources analysts. Most recently, health studies students have been recognized for their contributions related to health information as it pertains to COVID-19.

The Learning Outcomes for all programs align with the Quality Assurance Framework of Ontario and the Western Degree Outcomes.

Strengths/Innovations of the Program (as identified in the Self-Study brief)

- interdisciplinarity across all modules
- leadership in experiential learning locally, nationally and abroad
- community partnerships
- clear Strategic Priorities Plan
- recognition of faculty with numerous awards in teaching and research
- library support and administrative staff
- student satisfaction with programs
- Innovative curriculum

Strategic Planning Initiatives Going Forward (as noted in the Brief)

- Pursue and support leading interdisciplinary health research
- Advance cross-cultural perspectives and expertise
- Increase access to experiential learning opportunities
- Enhance alumni engagement
- Foster a caring environment that supports student, staff and faculty well-being
- Practice Continuous Quality Improvement in undergraduate education

Self-Study Process

In preparing for this review, the faculty in the School of Health Studies was involved in extensive review of its Strategic Priorities, held faculty and staff retreats, and reviewed and revised both the Learning Outcomes and curricula for the various programs. They also collected and analysed quantitative and qualitative data from current students and alumni.

Review Process

The external review committee (comprised of the two external reviewers and one internal reviewer) was provided with Volumes I and II in advance of their visit and then (due to pandemic restrictions) met online with the following over the course of the two days.

- Dr. John Doerksen, Vice Provost, Academic Programs
- Dr. Margaret McGlynn, Acting Vice-Provost of Academic Planning Policy and Faculty
- Dr. Jayne Garland, Dean, Faculty of Education
- Dr. Karen Danylchuk, Associate Dean, School of Health Studies
- Dr. Andrew Johnson, Acting Director, School of Health Studies
- Dr. Treena Orchard, Undergraduate Chair, School of Health Studies
- Health Science Faculty
- Undergraduate Students
- Administrative Staff
- Meagan Stanley, Teaching and Learning Librarian, Health & Medicine Disciplinary Coordinator

The review also included a virtual tour of the facilities.

Following the formal review, the external reviewers submitted a comprehensive report of their findings which was sent to the Director, the Associate Dean and Dean for review and response. These formative documents, including Volumes I and II of the Self-Study, the External Report, and the Departmental and Decanal responses form the basis of this summative assessment report of the Faculty of Health Sciences' BHSc Program.

Summative Assessment – External Reviewers' Report

The external reviewers note that:

Strongly emulating Western's values and mission, SHS is a successful example of what an interdisciplinary approach can bring to an understanding of human health. We maintain that SHS is a solid and vibrant undergraduate program that has witnessed significant growth in recent years. Application numbers and incoming averages are very high reflecting the popularity and reputation of excellence the program enjoys. Indeed, such numbers should be regarded with considerable pride given the challenges facing many academic units in Ontario universities today. With a curriculum developed and delivered by a passionate group of award-winning scholars, SHS students have the opportunity to learn about health from multidisciplinary

perspectives - as both a biomedical and as a social phenomenon. The reviewers concur that Western’s SHS remains among the top health studies/health sciences undergraduate programs in the province.

Strengths of the Program

- International reputation of programs
- Recognition that complexity and holistic nature of health requires an interdisciplinary approach
- Interdisciplinarity and excellence of faculty who engage with sense of mutual respect
- Approaches to decolonize and indigenize the curriculum
- Explicit critical and social justice orientation to curriculum
- Innovative pioneers in teaching practices; blended/flipped classrooms; community engaged learning
- Experiential learning opportunities

Challenges for the Program

- High student to faculty ratio that may impact pedagogy, assessments and counselling
- Limited opportunities for upper year student research/project work/capstones
- Perception that SHS programs are less valued than others in the Faculty
- Experiential learning opportunities for upper year students

Reviewers’ Recommendations and Department/Faculty Responses

REVIEWERS’ RECOMMENDATIONS	DECANAL/DEPARTMENT RESPONSE
<p><i>1. SHS should seek opportunities to collaborate with other programs/faculties on joint course offerings, and cross-unit teaching, to maximize use of existing Western resources -- both within FHS, but also with other programs (eg. MedSci) and Schools/Faculties (eg. SocSci, Schulich) where there is relevant expertise.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Underway: Curriculum committee is exploring ways to make substantive revisions to research course(s)
<p><i>2. Undertake a collaborative priority-setting exercise to explore a number of program approaches moving forward including: consolidation, refocusing, and restabilizing in the context of the surge in admissions in</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • On the agenda for discussion and implementation at the next faculty retreat

<p><i>recent intakes and the COVID-19 pandemic, and articulating a signature vision for the future of SHS.</i></p>	
<p>3. <i>Expand the capacity for more senior students to undertake supervised research projects, for example by creating a senior project or honours thesis course, and/or expanding the capacity of the Independent Study courses.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Discussions are underway about possibility of developing team projects for senior students as a major capstone
<p>4. <i>Aim to reduce reliance on MCQ-based assessment, particularly in upper- year courses.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Underway in collaboration with Centre for Teaching and Learning
<p>5. <i>Review student advising capacity in the SHS compared to university-wide norms, and adjust strategies and/or resources accordingly to enhance student access.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Discussions underway with FHS administration
<p>6. <i>Undertake a review of resource allocation and workload in SHS compared to norms in other programs in FHS and Western more broadly.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Item scheduled for discussion for annual workload meetings <p><u>Dean:</u></p> <ul style="list-style-type: none"> ▪ Student to faculty ratios are reviewed annually and are in line with other schools with the Faculty and university
<p>7. <i>Defer consideration of a new graduate program to a later date.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Agreed. Consultation with department faculty is underway <p><u>Dean:</u></p> <ul style="list-style-type: none"> • Agreed. HSH faculty are heavily involved in graduate programs in FHS
<p>8. <i>Consider enhancing faculty numbers through new hires, with a focus on consolidating existing needs rather than expanding into new disciplines/areas.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none"> • Discussions ongoing with senior administration <p><u>Dean:</u></p> <ul style="list-style-type: none"> • Faculty numbers in SHS have seen recent growth and is part of the annual planning process

<p>9. <i>Exercise careful and judicious management of admission in the next few years to improve student:faculty and student:TA ratios.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none">• Discussions ongoing with senior administration <p><u>Dean:</u></p> <ul style="list-style-type: none">• See #6 above
<p>10. <i>Evaluate student:TA ratios in SHS compared to other programs, and revise processes for TA allocation to ensure that courses are staffed with TAs with appropriate expertise/knowledge of the content area.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none">• Under discussion with School of Rehabilitation Studies
<p>11. <i>Expand the capacity for more senior students to undertake experiential learning.</i></p>	<p><u>Department:</u></p> <ul style="list-style-type: none">• Options have increased significantly and discussions are ongoing <p><u>Dean:</u></p> <ul style="list-style-type: none">• Agreed – a priority issue moving forward

Implementation Plan

The Implementation Plan provides a summary of the recommendations that require action and/or follow-up. The Department Chair/Director, in consultation with the Dean of the Faculty/Affiliated University College Principal will be responsible for monitoring the Implementation Plan. The details of progress made will be presented in the Deans’ Annual Report and filed in the Office of the Vice-Provost (Academic).

Recommendation	Proposed Action and Follow-up	Responsibility	Timeline
The School of Health Studies (SHS) should seek opportunities to collaborate with other programs/faculties on joint course offerings, and cross-unit teaching, to maximize use of existing Western resources -- both within FHS, but also with other programs (eg. MedSci) and Schools/Faculties (eg. SocSci, Schulich) where there is relevant expertise.	Underway: Curriculum committee is exploring ways to make substantive revisions to research course(s) (statistical programming course in third year; revision of research methods course to reflect full range of methods used in HS research)	Director, SHS (with curriculum committee)	Changes in place by September 2022.
Expand the capacity for more senior students to undertake supervised research projects, for example by creating a senior project or honours thesis course, and/or expanding the capacity of the independent study courses	Underway: Investigate the feasibility of offering a major project capstone course for Honours Specialization students in the School of Health Studies.	Director, SHS (with curriculum committee)	New research opportunities for undergrads in place by September 2022
Aim to reduce reliance on MCQ-based assessment, particularly in upper- year courses.	Underway: consultation with Centre for Teaching and Learning	Director, SHS (with curriculum committee)	New assessments in some upper year courses by September 2022

<p>Review student advising capacity in the SHS compared to university-wide norms, and adjust strategies and/or resources accordingly to enhance student access</p>	<p>Underway: Discussions with Faculty of Health Sciences (FHS) leadership</p>	<p>Director, SHS and FHS leadership</p>	<p>Capacity review and plan in place by July 1, 2022.</p>
<p>Evaluate student: TA ratios in SHS compared to other programs, and revise processes for TA allocation, to ensure that courses are staffed with TAs with appropriate expertise/knowledge of the content area</p>	<p>Underway: Discussions with School of Rehabilitation Studies</p>	<p>Director, SHS; Director, Health and Rehabilitation Sciences (HRS) grad program; FHS Leadership</p>	<p>Revised processes in place by July 1, 2022 for September 2022.</p>

ITEM 11.2(h) – Revised 2021-22 Sessional Dates – Faculty of Education and Ivey Business School (HBA Program)

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

EXECUTIVE SUMMARY:

The Faculty of Education has made minor changes to their 2021-22 sessional dates, as shown in the attached.

Given the uncertainty surrounding COVID, the Ivey Business School had originally submitted a high level summary of dates with the intention of filling in the gaps as the 2021-22 academic year drew closer. This submission closes the loop on what was missing from the original submission in September 2020.

ATTACHMENTS:

[Revised 2021-22 Sessional Dates – Faculty of Education](#)
[Revised 2021-22 Sessional Dates – HBA Program](#)

Revised Sessional Dates 2021-22 – Faculty of Education

2021	
September 2	Year 1 Registration and Orientation
September 6	Labour Day
September 7	Year 1 Classes Begin
September 7 – 10	1 st term Add/Drop
September 7 – October 1	Year 2 Practicum Two
October 4 – 29	Year 2 Practicum Three
October 11	Thanksgiving
October 12 – 15	Year 1 Fall Reading Week
November 1	Year 2 Classes Begin
November 15 – December 10	Year 1 Practicum One
November 29 – December 17	Year 2 Alternative Field Experience A
December 13 – 31	Year 1 & Year 2 Vacation
2022	
January 3	Classes Resume (Year 1 and 2)
January 3 – 7	2 nd term Add/Drop
February 14 – March 25	Year 2 Practicum Four
February 21	Family Day
March 14 – 18	Year 1 & 2 Spring Break
March 21 – April 14	Year 1 Practicum Two
April 15	Good Friday
March 28 – April 22	Year 2 Alternative Field Experience
April 14	Last Day of Term, Year 1
April 22	Last Day of Term, Year 2

Revised 2021-22 HBA Sessional Dates – Ivey Business

School Honours Business Administration

2021	
September 2	HBA1 Transfer Orientation Program
September 3	HBA1 Begins (Mandatory) First Day Academic Orientation for HBA1
September 7	First Day of Classes for HBA1 and HBA2
September 7-17	Add/Drop (A/B courses)
September 7-10	HBA2 IFP Classes (MANDATORY)
September 13	HBA2 Elective Classes Begin
October 11	Thanksgiving – No Classes
October 19-23	HBA2 Exam Period (including Saturday)
October 25-26	IFP Workshop Days (Mandatory)
November 1-5	Fall Break Week
November 10-12	IFP Client Meetings (Evenings and November 12 all day)
November 12	Last Day to drop A (Ivey half course) without penalty
November 17-19	HBA2 IFP Work Days (Mandatory)
November 26	HBA2 IFP NVP Presentations (Mandatory)
December 9 December 2	HBA2 Classes End
December 10 December 9	HBA1 Classes End
December 8-10	IFP Client Meetings (Evenings and December 10 All day)
December 11-17 December 3-10	HBA2 Exam Period (including Saturday and Snow Days)
December 10-15 December 10-17	HBA1 Exam Period (including Saturday and Snow Days)
2022	
January 10 January 3	HBA1 Classes Resume
January 10 January 3	HBA2 Classes Resume
January 10-14	Add/Drop B (Ivey half courses)
February 12-18	HBA2 Exam Week (including Saturday)
February 21-25	Spring Break Week
March 7	Last day to drop B half course without penalty
March 31	HBA2 Classes End
April 8	HBA1 Classes End
April 4 – 9 April 1-8	HBA2 Exams
April 11-13	HBA1 Exams

ITEM 11.2(i) – New Scholarships and Awards

(a) **ACTION REQUIRED:** FOR APPROVAL FOR INFORMATION

On behalf of the Senate, SCAPA approved the Terms of Reference for the following new scholarships and awards, for recommendation to the Board of Governors through the Vice-Chancellor.

James Robert Borbridge and Aileen Borbridge Bursary (Music)

Awarded annually to a full-time student entering any Music program in the Don Wright Faculty of Music, based on demonstrated financial need. Online financial assistance applications are available through Student Center and must be submitted by October 31st. The Office of the Registrar will select the recipient. This bursary was established with a generous bequest from the Estate of Mr. James Robert Borbridge. James and Aileen Borbridge’s hope was that students with music potential, who might not have been able to attend Western due to financial restraints, receive the support they need.

Value: 1 at \$4,000

Effective Date: 2021-2022 academic year

Lesley Mounteer Award in Student Leadership (Engineering)

Awarded annually to a full-time undergraduate student in Year 3 or higher of any program in the Faculty of Engineering, based on a minimum 70% average, who has shown exceptional leadership skills through involvement in extra-curricular activities in the Undergraduate Engineering Society or other engineering clubs/teams. A one-page statement outlining the student’s leadership skills and involvement must be completed with an online application through the Engineering Undergraduate Services website (<http://www.eng.uwo.ca/undergraduate>) by September 30th. The recipient will be selected by the Scholarship and Awards Committee in the Faculty of Engineering. This award was established by Alumni and friends in honour of Lesley Mounteer and her many contributions to better the lives of engineering students.

Value: 1 at \$2,000

Effective Date: 2021-2022 academic year

For twenty-six years, Lesley tirelessly supported engineering student leaders to be the best versions of themselves and to drive Western Engineering forward. Lesley was someone you could always turn to for help, support and guidance. Lesley retired from her position as Director of External Services in Engineering at Western in 2021, but her legacy will continue on in this award.

Norm Duke Industrial Award in Geology (Science)

Awarded annually to an undergraduate student entering third or fourth year of an Honours Specialization in Geology – For Professional Registration, based on a minimum 70% average, participation in field work through course work and a strong interest in pursuing a career in the Geology industry. Preference will be given to a student who is involved in sports. Candidates must submit a one-page statement outlining their interests and involvement by September 30th to the Departmental Office of Earth Sciences. The recipient will also be offered a paid summer internship with Millennial Silver, Mr. Jason Kosec’s company. A representative from Millennial Silver will be invited to sit on the committee but the Department of Earth Sciences will select the recipient in the fall. The recipient is not obligated to participate in the internship. This award was established by a generous gift from Mr. Jason Kosec (BSc 2014) in honour of Norm Duke.

Value: 1 at \$12,000

Effective Date: 2021-2022 to 2025-2026 academic years inclusive

Dr. Norman Duke joined the Department of Earth Sciences in 1983. During his time at Western, Dr. Duke's work focused on conducting regional metallogenic analysis. His areas of field study include the Archean Superior and Slave cratons, the Proterozoic Southern, Churchill, Bear and Grenville provinces, and the Phanerozoic Appalachian and Cordilleran orogens. Dr. Duke is widely respected for his contributions to the field of economic geology, receiving the Duncan R. Derry Award, the highest award bestowed by the Mineral Deposits Division of the Geological Association of Canada. Dr. Norman Duke's teachings and field courses had immeasurable impact to the many students he taught during his tenure, helping to inspire the next generation of geologists and earth scientists.

Dr. George L. Frederick & Mrs. Amelia Frederick Bursary (Schulich School of Medicine & Dentistry) Awarded annually to a first-year student entering the Bachelor of Medical Science program, based on demonstrated financial need. Online financial assistance applications are available through Student Center and must be completed by October 31st. The Office of the Registrar will select the recipient. This bursary was established with a generous gift from Mrs. Amelia Frederick on behalf of her and her husband, Dr. George L. Frederick (MSc 1953).

Value: 1 at \$2,000

Effective Date: 2021-2022 academic year

Dr. George L Frederick was able to complete his university degrees through the generosity of scholarships. He was passionate about his varied and changing career. It started with animal research in Ottawa, led to a one year research sabbatical at Cambridge University in the UK, then to human toxicology, and ended with Health and Welfare Canada, Bureau of Dangerous Drugs. He was very proud of earning international recognition in his career. All this was facilitated by the loving support of his wife Amelia Frederick. George died in 2020 at the age of 89. Amelia has established this bursary in memory of George to create opportunities for other motivated students. She wishes the recipients well in their academic studies and professional career.

Dr. George L. Frederick & Mrs. Amelia Frederick Scholarship (Schulich School of Medicine & Dentistry) Awarded annually to a student entering third year in an Honours Specialization in Interdisciplinary Medical Sciences in the Bachelor of Medical Science program, based on academic achievement (minimum 80% average). The Director of IMS, Associate Dean of BMSUE and the BMSUE Coordinator, within the Schulich School of Medicine & Dentistry, will select the recipient. This scholarship was established with a generous gift from Mrs. Amelia Frederick on behalf of her and her husband, Dr. George L. Frederick (MSc 1953).

Value: 1 at \$2,000

Effective Date: 2021-2022 academic year

Dr. George L Frederick was able to complete his university degrees through the generosity of scholarships. He was passionate about his varied and changing career. It started with animal research in Ottawa, led to a one year research sabbatical at Cambridge University in the UK, then to human toxicology, and ended with Health and Welfare Canada, Bureau of Dangerous Drugs. He was very proud of earning international recognition in his career. All this was facilitated by the loving support of his wife Amelia Frederick. George died in 2020 at the age of 89. Amelia has established this bursary in memory of

George to create opportunities for other motivated students. She wishes the recipients well in their academic studies and professional career.

Milos and Kveta Novak Engineering Entrance Scholarship (Engineering)

Awarded annually to a full-time undergraduate student entering first year in the Faculty of Engineering, based on academic achievement (minimum 80% average). The Office of the Registrar will select the recipient. This scholarship was established through a generous estate gift from Kveta Anna Novak.

Value: 1 at \$4,000

Effective Date: 2021-2022 academic year

Kveta (Kitty) Anna Novak (nee Jiraskova) travelled throughout the world as an Executive Chef with her husband Professor Milos Novak. Professor Novak taught in the Faculty of Engineering at Western from 1968 to 1990. He was considered one of the foremost world experts in dynamics of civil engineering structures and foundations. He made important contributions to earthquake engineering and wind engineering. Kveta died in 2020, predeceased by Milos in 1994.

Dr. Cathy MacLean Award in Rural Medicine (Schulich School of Medicine & Dentistry)

Awarded annually to full-time students completing Year 4 in the Doctor of Medicine (MD) program, who have been accepted into a Family Medicine Rural/Regional Residency Training Program. Preference will be given to students who have expressed an interest in establishing a practice in Rural Ontario. Candidates must submit an online application outlining their interest in Rural Family Medicine and practicing in Rural Ontario by March 31st. The Office of Distributed Education in consultation with the Department of Family Medicine will select the recipients with the approval of the Undergraduate Medical Education Awards Committee. This award was established by a generous donation from Dr. Stephen Jones, in honour of Dr. Cathy MacLean.

Value: 2 at \$10,000

Effective Date: 2021-2022 academic year

Dr. Stephen Jones completed his Medical degree at McGill University and went on to complete his residency in Family Medicine at Western. He credits his mentor, Dr. Cathy MacLean, for his success. Dr. Jones spent his career in Family Practice in rural southwestern Ontario and is hoping others will be inspired to follow in his footsteps.

Dhanda Family Award in Medicine (Schulich School of Medicine & Dentistry)

Awarded annually to a student completing Year 4 in the Doctor of Medicine (MD) program, who is planning to specialize in Rheumatology. Preference will be given to female students. Students must submit an online application which includes a statement outlining their demonstrated interest in Rheumatology to the Undergraduate Medical Education Office by March 31st. The Department of Rheumatology will select the recipient with the approval of the Undergraduate Medical Education Awards Committee. This award was established by a generous gift from Dr. Dhar Dhanda, Mrs. Harv Dhanda and their family, in memory of Dr. Dhanda's mother, Gurmej Kaur Dhanda, who passed away from the effects of scleroderma, an autoimmune rheumatic disease. Dr. Dhar Dhanda is a proud Western Alumnus who completed his Medical Degree in 1997 and Ophthalmology Residency in 2002.

Value: 1 at \$2,500

Effective Date: 2021-2022 to 2030-2031 academic years inclusive

Hotel Dieu 1888 Presidents Legacy Award (Schulich School of Medicine & Dentistry)

Awarded annually to a full-time student in Year 2 of the Doctor of Medicine (MD) program, Schulich School of Medicine & Dentistry, Windsor Campus, based on demonstrated academic achievement, leadership and volunteer involvement in the community. Candidates are asked to submit an online application to the Undergraduate Medical Education Office outlining their community involvement, along with a letter of reference from the community representative by March 31st. The recipient will be selected by the Associate Dean, Windsor Campus with the approval of the Undergraduate Medical Education Awards Committee. This award was established by the Professional Medical Staff Association of the former Hôtel Dieu Grace Hospital in Windsor, ON.

Value: 1 at \$1,480

Effective Date: 2021-2022 academic year

Halina Robinson Award in Science (Science)

Awarded annually to an undergraduate student in any year in the Faculty of Science, based on a minimum 70% average and demonstrated financial need. Online financial assistance applications are available through Student Center and must be submitted by September 30th. The Office of the Registrar will select the recipient. Preference will be given to a student who is the first member of their family to attend University. This award was established with a generous gift from Mrs. Halina Czajkowska-Robinson.

Value: 1 at \$1,000

Effective Date: 2021-2022 academic year

Halina Maria Czajkowska-Robinson was born in 1927. She was the daughter of a Polish military officer and wrote a book describing her experiences in Poland before and during World War II, "Heaven, Hell and Purgatory: A Canadian Memoir of a Happy Polish Childhood, Nazi Horror, and Swedish Refuge". She details that, after fleeing Zamosc for Warsaw in late 1940, she attended an underground school and later witnessed the destruction of the Warsaw Ghetto. She and her mother were arrested during the Warsaw Uprising in 1944, transported to Auschwitz, and from there deported to Bergen-Belsen. After the liberation of Bergen-Belsen in 1945, they were sent as displaced persons to Sweden, where Halina studied and became a Chemical Engineer. Resettled in Canada, she found work in a university laboratory, where her important observation led to the recognition of the first vinca alkaloid as a cure for childhood leukemia.

Dr. James Russell Robinson Award in Science (Science)

Awarded annually to undergraduate students in any year in the Faculty of Science, based on academic achievement, and demonstrated financial need. Online financial assistance applications are available through Student Center and must be submitted by September 30th. The Office of the Registrar will select the recipients. This award was established with a generous gift from Mrs. Halina Czajkowska-Robinson in memory of her husband Dr. James Russell Robinson (BSA 1948, MScA 1949, PhD 1953).

Value: 1 at \$1,000

Effective Date: 2021-2022 academic year

James Russell Robinson joined the Royal Canadian Armed Forces in 1941 where he trained as a radio technician and research technician during WWII. Following medical retirement from the RCAF he returned to university and graduated as a specialist in organic chemistry. As a Research Scientist with Agriculture Canada he authored more than 40 scientific papers from 1953 to 1985. After retiring, he

published several critical studies concerning the history of radar, e.g. "Radar Intelligence and The Dieppe Raid" and "Radar Officers of The Royal Canadian Air Force 1940-1946". He has provided on-going funding for a collection of books at The Weldon Library, U.W.O. all relative to Radar technology and history. Dr. Robinson died in 2010 at the age of 89.

Dr. David Gilbert Memorial Award in Dentistry (Schulich School of Medicine & Dentistry)

Awarded annually to an undergraduate student entering Year 1 of the Doctor of Dental Surgery (DDS) program, based on academic achievement and demonstrated financial need. Candidates must complete an admission bursary application, available online through Student Center, by April 1st. The recipient will be selected by the Office of the Registrar. This award was established by Kathleen Wilkinson (BA 1975) and Gregory Gilbert (BA 2008) in 2020 to honour the 20th anniversary of the passing of their husband and father, Dr. David Gilbert (DDS 1977).

Value: 1 at \$1,500

Effective Date: 2021-2022 to 2025-2026 academic years inclusive

Olga and Dmetro Maykut Memorial Bursary (Schulich School of Medicine & Dentistry)

Awarded annually to a student in Year 3 or 4 of the Doctor of Medicine (MD) program, based on demonstrated financial need. Online financial assistance applications are available through Student Center and must be completed by October 31st. The recipient will be selected by the Office of the Registrar. This bursary was established with a generous gift from Dr. Robert J. Maykut (MD '84) and Mr. Timothy S. Maloney in memory of Dr. Maykut's late parents, Olga and Dmetro Maykut, and for the all sacrifices they made for his education.

Value: 1 at \$1,800 (with review of value in final year)

Effective Date: 2021-2022 to 2025-2026 academic years inclusive

Dr. Robert J. Maykut trained in Respiratory Medicine at Western and was an Associate Professor of Medicine at St. Joseph's Health Centre in London, Ontario until late 2000. His career took him to New York State to become the Program Director of Internal Medicine Clinical Clerkship Training at the Binghamton Clinical Campus, affiliated with Upstate Medical University. Several years later, Dr. Maykut joined the Clinical Development and Medical Affairs division of Novartis Pharmaceuticals Corporation, where he contributed to research endeavours on therapeutic products for asthma, COPD and Cystic Fibrosis-related pulmonary disease. Dr. Maykut retired in 2016 and lives with his husband in Key West, Florida.

Physical Education Class of 1970 Bursary in Kinesiology (Health Sciences)

Awarded annually to a student in 2nd, 3rd or 4th year of an Honours Specialization in Kinesiology, based on demonstrated financial need. Online financial assistance applications are available through Student Center and must be submitted by October 31st. The Office of the Registrar will select the recipient. This bursary was established through generous donations from the Physical Education Class of 1970.

Value: 1 at \$1,500

Effective Date: 2021-2022 to 2025-2026 academic years inclusive

Sweitzer Family Bursary (Any Undergraduate Program)

Awarded annually to an undergraduate student, in any year of any program, based on demonstrated financial need. Preference will be given to an Indigenous student (First Nations, Inuit or Métis). Online financial assistance applications are available through Student Center and must be submitted by October 31st. The Office of the Registrar will select the recipient. This bursary was established with a generous gift from Frances Sweitzer (BA 1966) and her husband Jim Sweitzer.

Value: 1 at \$2,000

Effective Date: 2021-2022 to 2025-2026 academic years inclusive

Margaret Kesson Pearen Memorial Bursary (Schulich School of Medicine & Dentistry)

Awarded annually to a 3rd or 4th year Medical Science or Neuroscience student, based on demonstrated financial need. Preference will be given to a student who is the first in their family to attend post-secondary school. Online financial assistance applications are available through Student Center and must be completed by October 31st. The Office of the Registrar will select the recipient. This bursary was established with a generous gift from Nicole Balan and Richard Pearen in memory of Margaret Kesson Pearen.

Value: 1 at \$1,000

Effective Date: 2021-2022 academic year

Margaret graduated in 1967 from the faculty of Pharmacy at the University of Toronto with the John Roberts Scholarship for the highest marks in her graduation year. She was the first in her family to attend university, having received an entrance scholarship. Her career was devoted to direct patient care within a community pharmacy setting, as a community pharmacist, owner and manager. Margaret was a devoted wife, mother, and daughter. Margaret believed in giving back in the spirit of volunteerism and charitable giving. Margaret died suddenly of an aggressive glioblastoma brain tumor in 2020.

Donna Deaken Graduate Scholarship (Engineering)

Awarded annually in even years to a full-time Master's student in the Faculty of Science (including the Masters of Environmental & Sustainability) who is conducting research studies related to environmental protection and in odd years to a full-time Master's student in the Faculty of Engineering, who is conducting research studies related to aviation, aerospace or environmental protection. Candidates must demonstrate strong academic achievement (minimum of 78% average or equivalent) and research merit. Preference will be given to female students who are Canadian citizens or permanent residents with demonstrated financial need. Candidates must submit a one-page statement detailing their research, academic achievement and their financial need, if applicable, to the respective Dean's Office in the Faculty of Science or the Faculty of Engineering by September 30th. The Graduate Scholarship Committee in Science or the Graduate Scholarship Committee in Engineering will select the recipient. At least one representative of the selecting committee must hold membership in the School of Graduate and Postdoctoral Studies. This award was established with a generous bequest from the Estate of Miss Donna Marie Deaken (BSc Honors 1964).

Value: 1 at \$19,200

Effective Date: May 2021

Donna worked at the Ontario Centre of Forensic Sciences and later moved to the Xerox Research Centre of Canada as Head of the Department of Occupational Health and Safety. Donna was an expert skier and ski instructor, keen pilot and member of the Ninety-Nines, Inc. International Organization of Women

Pilots. After retirement, she taught English as a Second Language and travelled extensively. Donna died in 2017 at the age of 76.

Drs. Vipin and Bhooma Bhayana Award in Family Medicine (Schulich School of Medicine & Dentistry)
Awarded annually to a student completing Year 4 in the Doctor of Medicine (MD) program, who is planning to specialize in Family Medicine and work with marginalized communities. Candidates must submit an online application which includes a statement outlining their demonstrated interest in Family Medicine, and working with marginalized communities, to the Undergraduate Medical Education Office by March 31st. The Department of Family Medicine will select the recipients with the approval of the Undergraduate Medical Education Awards Committee. This award was established by a generous gift from Dr. Bhooma Bhayana (MD 1985) and Dr. Vipin Bhayana.

Value: 1 at \$1,000
Effective Date: 2021-2022 academic year

Dr. Edward James Middleton Graduate Bursary (Schulich School of Medicine & Dentistry)
Awarded annually to graduate students enrolled in a Master's Biochemistry or Physiology and Pharmacology program, based on research merit and demonstrated financial need. Preference will be given to students who have been accepted into a Doctor of Medicine (MD) program and have taken a leave to pursue a Master's degree in Biochemistry or Physiology and Pharmacology. Graduate students must submit a one-page statement outlining their research studies and financial need to their respective Department of Biochemistry or Physiology and Pharmacology by October 31st. The Graduate Scholarship Committees in Biochemistry and Physiology and Pharmacology, in cooperation with the Scholarship Committee in the Schulich School of Medicine & Dentistry, will select the recipients. This bursary was established with a generous bequest from the Estate of Dr. Edward James Middleton (PhD 1959 from Rutgers University, MSc 1955 and BSc 1952 from Western).

Value: 3 at \$9,000
Effective Date: May 2021

Ronald J. Truant Award in Psychiatry (Schulich School of Medicine & Dentistry)
Awarded annually to a full-time Doctor of Medicine (MD) student entering year 4, who has excelled in their Psychiatry rotations and who shows potential to complete their residency in Psychiatry. While preference will be given to students of the Windsor Campus, this award is open to all 4th year MD students of the Schulich School of Medicine & Dentistry. The recipient will be selected by the Department of Psychiatry with the approval of the Undergraduate Medical Education Awards Committee. This award was established by Mrs. Noella J. Truant in memory of her husband, Ronald J. Truant.

Value: 1 at \$1,000
Effective Date: 2020-2021 academic year

Ron became a Chartered Accountant in 1976. In 1980 he began working as an International Consultant starting with an Education Development Project in Nigeria. He went on to serve both as a Trustee and as a Board Member of the Windsor Catholic High School Board. He also served as an Instructor for the Faculty of Business, University of Windsor, from 1978 to 1984. Ron was involved in Healthcare having served on many Boards particularly as Chair of Windsor Regional Hospital and as a Board Member of Hotel Dieu-Grace Healthcare. He was an astute businessman, forward thinker and a visionary who

provided great leadership and direction. Healthcare and Education were his passion. Ron died in 2016 at age 65.

KPMG Equity, Diversity and Inclusion HBA2 Award (Ivey)

Awarded annually to full-time HBA2 students at the Ivey Business School with a minimum 70% average who exhibit enthusiasm, demonstrate behaviours, and act intentionally to foster a safe community that embraces equity, diversity, and inclusion. The recipient will be nominated by their peers and selected by the HBA Scholarship Committee, with input from Ivey Faculty and members of the HBA Association. These awards were established with a generous gift from KPMG Foundation.

Value: 2 at \$7,500

Effective: 2021-2022 to 2023-2024 academic years inclusive

(b) ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

On behalf of the Senate, SCAPA approved the Terms of Reference for the following new scholarships, funded by operating.

International Engineering Admission Scholarship (Engineering)

Awarded to full time international undergraduate students entering year one studies on main campus in the Faculty of Engineering. This scholarship is available to students selected as a Western International President's Scholar, Western International Provost's Scholar or a Western International Scholar. The Faculty of Engineering will match the value of the Western International scholarship offered.

Value: number and value will vary based on the value of the Western International Scholarship offered

International Arts and Humanities Scholarship (Arts and Humanities)

Awarded to full time international undergraduate students entering year one studies on main campus in the Faculty of Arts and Humanities. This scholarship is available to students selected as a Western International President's Scholar, Western International Provost's Scholar or a Western International Scholar. The Faculty of Arts and Humanities will match the value of the Western International scholarship offered.

Value: number and value will vary based on the value of the Western International Scholarship offered

International Health Sciences Admission Scholarship (Health Sciences)

Awarded to full time international undergraduate students entering year one studies on main campus in the Faculty of Health Sciences. This scholarship is available to students selected as a Western International President's Scholar, Western International Provost's Scholar or a Western International Scholar. The Faculty of Health Sciences will match the value of the Western International scholarship offered.

Value: number and value will vary based on the value of the Western International Scholarship offered

International Information and Media Studies Admission Scholarship (Information and Media Studies)
Awarded to full time international undergraduate students entering year one studies on main campus in the Faculty of Information and Media Studies. This scholarship is available to students selected as a Western International President's Scholar, Western International Provost's Scholar or a Western International Scholar. The Faculty of Information and Media Studies will match the value of the Western International scholarship offered.

Value: number and value will vary based on the value of the Western International Scholarship offered

ITEM 11.3(a) – Reports on Promotion, Tenure and Continuing Appointments

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

EXECUTIVE SUMMARY:

The Vice-Provost (Academic Planning, Policy & Faculty) provides an annual report on promotion and tenure to SCUP for transmittal to Senate in accordance with the SCUP Terms of Reference.

ATTACHMENTS:

[Faculty Relations memo on Reports on Promotion, Tenure and Continuing Appointments
2008-2021 Report on Promotion and Continuing Appointment Cases Considered Under the Librarians
and Archivists Collective Agreement](#)
[2020-2021 Report on Promotion and/or Tenure or Continuing Status Cases Considered Under the
Faculty Collective Agreement](#)



TO: Faculty Relations

FROM: Equity & Human Rights Services

DATE: May 21, 2021

SUBJECT: *Reports on Promotion, Tenure and Continuing Appointment*

Attached you will find reports summarizing the information requested on the designated group status of those individuals considered for Promotion, Tenure and/or Continuing Appointment under the UWOPA and UWOPA-LA Collective Agreements for 2020-2021.

As in previous years, these reports are provided with the following notes:

- The information related to the designated groups – with the exception of gender – was provided by Equity & Human Rights Services (EHRS).
- The information provided by EHRS is in aggregate form only and was drawn from the employment equity database.
- All information in the database is obtained through self-identification surveys sent to employees; therefore, information is only available for those individuals who have completed surveys.
- Where the information is unknown, it is considered to be a “no” response (i.e. not a member of designated group).
- For reasons of confidentiality, the information provided by EHRS is suppressed in cases where there are fewer than 5 individuals in the group considered for Promotion, Tenure and/or Continuing Appointment. Data may also be suppressed where deemed necessary by EHRS.

2008-2021 REPORT ON PROMOTION AND CONTINUING APPOINTMENT CASES CONSIDERED UNDER THE LIBRARIANS AND ARCHIVISTS COLLECTIVE AGREEMENT								
(as required under the Article <i>Promotion and Continuing Appointment</i>)								
Total cases considered Promotion or Continuing Appointment								
Men	8							
Women	22							
Indigenous peoples	0							
Members of racialized groups	3							
Persons with Disabilities	1							
Probationary Appointees and/or Members holding Continuing Appointments considered for Promotion								
	Process initiated by Vice Provost and Chief Librarian or Dean within the first month of the last year of probationary period	Process initiated by the Vice Provost and Chief Librarian or Dean	Process initiated by Member	Positive Committee recommendation	Negative Committee recommendation	Positive Provost recommendation	Negative Provost recommendation	
Men	1	2	0	3	0	3	0	
Women	3	1	3	7	0	7	0	
Indigenous peoples	s	s	s	s	0	s	0	
Members of racialized groups	s	s	s	s	0	s	0	
Persons with Disabilities	s	s	s	s	0	s	0	
Probationary Appointees considered for Continuing Appointment								
	Process initiated by Vice Provost and Chief Librarian or Dean within the first month of the last year of the Member's probationary period at the General Rank	Process initiated by Vice Provost and Chief Librarian or Dean within the first month of the last year of probationary period combined with Process initiated by Member	Process initiated by Vice Provost and Chief Librarian or Dean at any time prior to final six months of probationary period	Positive Committee recommendation	Negative Committee recommendation	Positive Provost recommendation	Negative Provost recommendation	
Men	0	5	0	5	0	5	0	
Women	1	12	2	15	0	15	0	
Indigenous peoples	s	0	s	0	0	0	0	
Members of racialized groups	s	2	s	2	0	2	0	
Persons with Disabilities	s	1	s	1	0	1	0	
Total cases considered for Promotion and Continuing Appointment								30
<p>The information related to the designated groups - with the exception of gender - was provided by Equity & Human Rights Services. This information was provided, in aggregate form only, from the Employment Equity Database. All information in this database is obtained through the self-identification surveys sent to employees. Therefore, information about membership in a designated group is only available for individuals who completed and returned the surveys. Those who have not completed a survey and who were considered for promotion and/or continuing appointment are counted as not being members of a designated group. For reasons of confidentiality data is suppressed (s) in cases where there were less than 5 individuals considered in a group and/or where deemed necessary by EHRSS. Please note that Clause numbers have been removed from this report, as they have varied across the Collective Agreements (i.e. between 2008-2021). The equity data for the total cases considered has not been suppressed.</p>								

June 11, 2021

2020-2021 REPORT ON PROMOTION AND/OR TENURE OR CONTINUING STATUS CASES CONSIDERED UNDER THE FACULTY COLLECTIVE AGREEMENT

(as required under Clause 22 in the Article *Promotion, Tenure and Continuing Status*)

Clause 22 (a) - Total cases considered for Promotion and/or Tenure or Continuing status (Clause 16)									
Men	34								
Women	18								
Indigenous peoples	0								
Members of racialized groups	11								
Persons with Disabilities	0								
Clause 22 (b) & (d) - Probationary Assistant Professors or Probationary Associate Professors, TS considered for Promotion and/or Tenure or Continuing Status									
	Process initiated by Dean in the last year - Clause 16.1	Process initiated by Dean in any year before the last year - Clause 16.3	Process initiated by Member by March 1 of the 3rd year for consideration in the 4th year - Clause 16.4	Process initiated by Member by March 1 in the last year notwithstanding leave extensions - Clause 16.7.1	Positive Committee recommendation - Clause 18	Negative Committee recommendation - Clause 18	Positive Provost decision - Clause 19	Negative Provost decision - Clause 19	
Men	7	12	0		18	1	18	1	
Women	2	4	1		7	0	7	0	
Indigenous peoples	0	0	s		0	0	0	0	
Members of racialized groups	1	0	s		1	0	1	0	
Persons with Disabilities	0	0	s		0	0	0	0	
Clause 22 (c) - Probationary Associate Professors or Probationary Associate Professors, TS considered for Promotion and/or Granting of Tenure or Continuing Status									
	Process initiated by the Dean in the last year of the appointment - Clause 16.2	Process initiated by Dean in any year before the last year - Clause 16.3			Positive Committee recommendation - Clause 18	Negative Committee recommendation - Clause 18	Positive Provost decision - Clause 19	Negative Provost decision - Clause 19	
Men		1			1	0	1	0	
Women		0			0	0	0	0	
Indigenous peoples		s			s	0	s	0	
Members of racialized groups		s			s	0	s	0	
Persons with Disabilities		s			s	0	s	0	
Clause 22 (d) & (e) - Tenured Associate Professors or Tenured Associate Professors, TS with Continuing Status considered for Promotion									
	Process initiated by Dean - Clause 16.5	Process initiated by Member no earlier than three years after promotion to Associate Professor - Clause 16.6			Positive Committee recommendation - Clause 18	Negative Committee recommendation - Clause 18	Positive Provost decision - Clause 19	Negative Provost decision - Clause 19	
Men	13	1			14	0	14	0	
Women	11	0			11	0	11	0	
Indigenous peoples	0	s			0	0	0	0	
Members of racialized groups	10	s			10	0	10	0	
Persons with Disabilities	0	s			0	0	0	0	
Clause 22 (g) - Limited-Term Assistant and Associate Professors Considered for Promotion									
	Process initiated by Dean - Clause 16.5.1	Process initiated by Member - Clause 16.4.2	Process initiated by Member - Clause 16.6.1		Positive Committee recommendation - Clause 18	Negative Committee recommendation - Clause 18	Positive Provost decision - Clause 19	Negative Provost decision - Clause 19	
Men									
Women									
Indigenous peoples									
Members of racialized groups									
Persons with Disabilities									
Total cases considered for Promotion and/or Tenure									52

The information related to the designated groups - with the exception of gender - was provided by Equity & Human Rights Services. This information was provided, in aggregate form only, from the Employment Equity database. All information in this database is obtained through the self-identification surveys sent to employees. Therefore, information about membership in a designated group is only available for individuals who completed the equity survey. Those who have not completed a survey and who were considered for tenure and/or promotion are counted as not being members of a designated group. For reasons of confidentiality, with the exception of gender, equity data is suppressed (s) in cases where there were fewer than 5 individuals considered in a group (i.e. under a given Clause) and/or data may be suppressed where deemed necessary by EHRS.

ITEM 11.4(a) – Proposal to URB to Update MAPP 7.14

ACTION REQUIRED: FOR APPROVAL FOR INFORMATION

Recommended: That Senate recommend for approval to the Board of Governors the amendments to MAPP 7.14, Policy and Procedures for Ethical Review of Research Involving Human Participants, effective June 17, 2021.

EXECUTIVE SUMMARY:

At the November 28, 2017 meeting, URB approved the elimination of the URB Sub-Committee University Council on Research Ethics Involving Human Participants (UCRE) to be effective December 1, 2017. There is now a need to update MAPP 7.14, Policy and Procedures for Ethical Review of Research Involving Human Participants, to remove reference to the eliminated URB Sub-Committee UCRE and to accurately reflect its governance, functions, and accountabilities.

Updates

1. Update MAPP 7.14 title
2. Removal of reference to the URB Sub-Committee University Council on Research Ethics Involving Human Participants (UCRE).
3. Addition of institutional senior administration to reflect accountability for ensuring the allocation of ongoing financial and administrative resources.
4. Accurately reflect Western’s internal governance framework, when compared with external regulatory requirements (as outlined by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, article 6.2): *“The highest body within an institution shall: establish the REB or REBs; define an appropriate reporting relationship with the REBs; and ensure the REBs are provided with necessary and sufficient ongoing financial and administrative resources to fulfill their duties.”*
5. Updated information of the functions and responsibilities of the Research Ethics Board (REB)
6. Addition of Western Research’s ‘Research Ethics and Compliance Office’ in support of Western’s REBs.
7. Include information whereby Western may enter into an REB Reciprocity Agreement with other qualified or accredited REBs
8. Addition of a Glossary of Terms

The current Terms of Reference for both the Health Sciences (HS) and Non-Medical (NM) REBs are included for information.

Primary Contact

Erika Basile, Director, Research Ethics and Compliance ebasile@uwo.ca
Lesley Rigg, Vice President (Research) vpr@uwo.ca

Consultation

K. Shoemaker, Associate Vice-President (Research)
R. Graham, NMREB Chair

P. Jones, HSREB Chair
University Secretariat
Research Ethics and Compliance Office

ATTACHMENTS:

[POLICY 7.14 – Policy and Procedures for Ethical Review of Research Involving Human Participants – Track Changes Copy](#)

[POLICY 7.14 – Policy and Procedures for Ethical Review of Research Involving Human Participants – Clean Copy](#)

[Western University’s Health Science Research Ethics Board \(HSREB\) – Terms of Reference](#)

[Western University’s Non-Medical Research Ethics Board \(NMREB\) – Terms of Reference](#)

POLICY 7.14 – ~~Policy and Procedures for Ethical Review of~~ Research Involving Human Participants

Policy Category: Research

Subject: Human Ethics

Approving Authority: Board of Governors

Responsible Officer: Vice-President (Research)

Responsible Office: Office of the Vice-President (Research)

Related University Policies: MAPP 7.0 – Academic Integrity in Research Activities

Effective Date: June 30, 2009

Supersedes: June 30, 2009 (NEW)

POLICY

I. PURPOSE

To cultivate an environment in which the conduct of Research involving Human Participants, performed by faculty, staff or students of or in affiliation with The University of Western Ontario (Western), follows the highest ethical standards.

To promote an awareness and understanding of how the Core Ethical Principles of Respect for Persons, Concern for Welfare, and Justice are applied within the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) as well as all applicable regulations, guidelines, and standards pertaining to human participant protection: and

To establish an independent human research ethics review process charged with the task of promoting the ethical pursuit of Western's research objectives.

II. SCOPE

This policy applies to all research involving humans conducted by faculty, staff or students of or in affiliation with Western (Western Human Research).

III. AUTHORITY AND RESPONSIBILITY

- a) The Research Ethics Boards (REBs) are accountable to the Board of Governor's with respect to the processes the REBs follow in pursuit of their mandates.
- b) The Vice-President (Research) is designated as the senior administrative officer of Western responsible to ensure Western's REBs are provided with necessary and

POLICY 7.14 – Research Involving Human Participants

sufficient ongoing financial and administrative resources to fulfill their regulatory duties.

- c) Western's Research Ethics and Compliance Office (RECO) is responsible to provide administrative support and to facilitate the REBs' management of the approval and monitoring processes for Western Human Research.
- d) The REBs shall act independently of the Board of Governors when making decisions regarding the ethics of Western Human Research. Neither the Board of Governors nor any other entity may override a REB's decision to approve, reject, request modifications to, or terminate any proposed or ongoing research. Notwithstanding this point, the REBs are accountable to the Board of Governors with respect to the processes the REBs follow in pursuit of this policy.
- e) For the final meeting of the Board of Governors each year, Director of Research Ethics and Compliance shall submit a report to the Board of Governors through the University Research Board (URB) regarding the REBs' activities. This report shall include information regarding the number of protocols reviewed by both REBs, the efficiency of the review process, and related procedural matters.
- f) The RECO is responsible to provide leadership to serve Western's research community of faculty, staff and students who share responsibility for undertaking human participant research in alignment with all external and institutional requirements and statutory requirements.
- g) Western's REBs may be designated as another institution's REB of Record or, conversely, another institution's research ethics board may be designated as the Western REB of Record (e.g. for the purpose of multi-centre research). In each case, it is subject to approval by one the relevant Western REB and the Vice-President (Research). The designated REB acting as the Board of Record carries out the mandate of the designating institution's REB provided it meets and maintains acceptable research ethics review qualification or accreditation standards.

IV. RESPONSIBILITY OF THE RESEARCH ETHICS BOARDS

- a) Western's REBs are established to protect the rights and welfare of human participants who take part in Western Human Research.
- b) The REBs shall review the ethical acceptability of all Western Human Research, regardless of where the research is conducted.
- c) The REBs will provide initial review and ongoing oversight of research projects to ensure that they meet the ethical principles and that they comply with all applicable regulations, guidelines, and standards pertaining to human participant protection. The REBs shall comply with and apply:
 - i. The principles of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) for all research;
 - ii. As applicable to the research, the requirements of the International Conference on Harmonisation (ICH) Good Clinical Practice (GCP); Part C, Division 5 of the Food and Drug Regulations; Part 4 of the Natural Health Products Regulations; Part 3 of the Medical Devices Regulations, the provisions of the Ontario Personal Health Information Protection Act (PHIPA) and research requirements under O. Reg. 329/04;

POLICY 7.14 – Research Involving Human Participants

iii. When applicable to the research, the requirements of the *U.S. federal regulations* to the extent that they exceed the applicable Canadian regulations and guidelines.

d) Western's REBs have the authority to ensure that all research they review is designed and conducted in an ethically acceptable manner.

This includes:

- i. rejecting, proposing modifications to, or terminating any proposed or ongoing research involving humans that the REB deems to be noncompliant with the applicable regulations, guidelines, and standards pertaining to human participant protection, or
- ii. approving any research that the REBs deems to comply with the applicable regulations, guidelines, and standards pertaining to human participant protection.

V. NON-COMPLIANCE

a) Failure to comply with Western's policies and procedures may prevent approval of pending ethics applications and/or may result in the revocation of approval of current studies being revoked by the REBs. As warranted by the severity of circumstances, an REB may also send notification of such failure to comply to the Vice-President (Research), the researcher's Dean, Chair or Director, Institute Heads, and appropriate funding and licensing agencies.

b) Failure to comply with this policy may result in the revocation of grant funding.

~~1.00 This policy applies to all instances of research involving human participants performed at The University of Western Ontario, and to University faculty, staff or students carrying out research involving human participants as principal or responsible investigators at another institution or site.~~

~~2.00 All research involving human participants must adhere to the policies and procedures of The University of Western Ontario, the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans, and other relevant guidelines and legislation.~~

~~3.00 The University Council on Research Ethics Involving Human Participants (UCRE) advises the University Research Board (URB) on matters of policy pertaining to the ethics review of research involving human participants. The Health Sciences Research Ethics Board (HSREB) and the Non-Medical Research Ethics Board (NMREB) are responsible to UCRE for ensuring the appropriate oversight of research involving human participants in compliance with the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and other relevant guidelines and legislation.~~

~~4.00 All applications for approval to conduct research involving human participants will be reviewed by a Research Ethics Board (REB) located at Western or sanctioned by Western, which has the authority to approve or reject an application, require the alteration of an application, or stop or limit research that is already underway.~~

~~5.00 Studies may not commence until the ethics application is approved by the REB and signed by the appropriate REB official.~~

POLICY 7.14 – Research Involving Human Participants

6.00 — Failure to comply with the University's policies and procedures may prevent approval of pending ethics applications and/or may result in approval of current studies being revoked by the REB. As warranted by the severity of circumstances, the REB may also send notification of such failure to comply to the researcher's Dean, Chair or Director, Institute Heads, and appropriate funding and licensing agencies.

PROCEDURES

All guidelines, forms and instructions are accessible on the [Office of Research Ethics Research Ethics and Compliance](http://www.uwo.ca/research/ethics) website at <http://www.uwo.ca/research/ethics>

Glossary of Terms

Core Ethical Principles of Respect for Persons, Concern for Welfare, and Justice – Respect for human dignity requires that research involving humans be conducted in a manner that is sensitive to the inherent worth of all human beings and the respect and consideration that they are due. Respect for human dignity is expressed through three core principles: Respect for Persons, Concern for Welfare, and Justice. These core principles transcend disciplinary boundaries and, therefore, are relevant to the full range of research covered by the **Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 (2018)**

Human Participant – An individual whose data, biological materials, or responses to interventions, stimuli, or questions by a researcher are relevant to answering the research question(s). Also referred to as a “human participant,” and in other policies/guidance as “subject” or “research subject (as defined by TCPS2 [2018] https://ethics.gc.ca/eng/tcps2-eptc2_2018_glossary-glossaire.html).

Multi-centre - The research is reasonably expected to be conducted at more than one centre participating in the delegated REB model.

Research – An undertaking intended to extend knowledge through a disciplined inquiry and/or systematic investigation (as defined by TCPS2 [2018] https://ethics.gc.ca/eng/tcps2-eptc2_2018_glossary-glossaire.html).

Research Ethics Board of Record (REB of Record) – The qualified Research Ethics Board that has been delegated authority for the ethics review and ethical oversight of a research study.

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) – A joint policy of Canada's three federal research agencies – the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC), or “the Agencies”. The TCPS covers research involving human participants in person, by mail-out or internet. TCPS also applies to research involving human tissue and personal data collected from human participants. (see: https://ethics.gc.ca/eng/tcps2-eptc2_2018_introduction.html#1)

Western 's Research Ethics Boards (REBs) –

- **Non-Medical Research Board (NMREB):** reviews research studies that predominately deal with social, behavioral, and cultural research in a non-clinical, non-patient-based population.
- **Health Science Research Ethics Board (HSREB):** reviews research studies that take place predominately inside a medical or health care environment or involve a patient population.

POLICY 7.14 – Research Involving Human Participants

Policy Category:	Research
Subject:	Human Ethics
Approving Authority:	Board of Governors
Responsible Officer:	Vice-President (Research)
Responsible Office:	Office of the Vice-President (Research)
Related University Policies:	MAPP 7.0 – Academic Integrity in Research Activities
Effective Date:	June 17, 2021
Supersedes:	June 30, 2009

I. PURPOSE

To cultivate an environment in which the conduct of Research involving Human Participants, performed by faculty, staff or students of or in affiliation with The University of Western Ontario (Western), follows the highest ethical standards.

To promote an awareness and understanding of how the Core Ethical Principles of Respect for Persons, Concern for Welfare, and Justice are applied within the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) as well as all applicable regulations, guidelines, and standards pertaining to human participant protection: and

To establish an independent human research ethics review process charged with the task of promoting the ethical pursuit of Western's research objectives.

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This policy applies to all research involving humans conducted by faculty, staff or students of or in affiliation with Western (Western Human Research).

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- a) The Research Ethics Boards (REBs) are accountable to the Board of Governor's with respect to the processes the REBs follow in pursuit of their mandates.
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POLICY 7.14 – Research Involving Human Participants

- d) The REBs shall act independently of the Board of Governors when making decisions regarding the ethics of Western Human Research. Neither the Board of Governors nor any other entity may override a REB's decision to approve, reject, request modifications to, or terminate any proposed or ongoing research. Notwithstanding this point, the REBs are accountable to the Board of Governors with respect to the processes the REBs follow in pursuit of this policy.
- e) For the final meeting of the Board of Governors each year, Director of Research Ethics and Compliance shall submit a report to the Board of Governors through the University Research Board (URB) regarding the REBs' activities. This report shall include information regarding the number of protocols reviewed by both REBs, the efficiency of the review process, and related procedural matters.
- f) The RECO is responsible to provide leadership to serve Western's research community of faculty, staff and students who share responsibility for undertaking human participant research in alignment with all external and institutional requirements and statutory requirements.
- g) Western's REBs may be designated as another institution's REB of Record or, conversely, another institution's research ethics board may be designated as the Western REB of Record (e.g. for the purpose of multi-centre research). In each case, it is subject to approval by one the relevant Western REB and the Vice-President (Research). The designated REB acting as the Board of Record carries out the mandate of the designating institution's REB provided it meets and maintains acceptable research ethics review qualification or accreditation standards.

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- c) The REBs will provide initial review and ongoing oversight of research projects to ensure that they meet the ethical principles and that they comply with all applicable regulations, guidelines, and standards pertaining to human participant protection. The REBs shall comply with and apply:
 - i. The principles of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) for all research;
 - ii. As applicable to the research, the requirements of the International Conference on Harmonisation (ICH) Good Clinical Practice (GCP); Part C, Division 5 of the Food and Drug Regulations; Part 4 of the Natural Health Products Regulations; Part 3 of the Medical Devices Regulations, the provisions of the Ontario Personal Health Information Protection Act (PHIPA) and research requirements under O. Reg. 329/04;
 - iii. When applicable to the research, the requirements of the *U.S. federal regulations* to the extent that they exceed the applicable Canadian regulations and guidelines.
- d) Western's REBs have the authority to ensure that all research they review is designed and conducted in an ethically acceptable manner.

POLICY 7.14 – Research Involving Human Participants

This includes:

- i. rejecting, proposing modifications to, or terminating any proposed or ongoing research involving humans that the REB deems to be noncompliant with the applicable regulations, guidelines, and standards pertaining to human participant protection, or
- ii. approving any research that the REBs deems to comply with the applicable regulations, guidelines, and standards pertaining to human participant protection.

V. NON-COMPLIANCE

- a) Failure to comply with Western's policies and procedures may prevent approval of pending ethics applications and/or may result in the revocation of approval of current studies being revoked by the REBs. As warranted by the severity of circumstances, an REB may also send notification of such failure to the Vice-President (Research), the researcher's Dean, Chair or Director, Institute Heads, and appropriate funding and licensing agencies.
- b) Failure to comply with this policy may result in the revocation of grant funding.

All guidelines, forms and instructions are accessible on the website at <http://www.uwo.ca/research/ethics>

Glossary of Terms

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Research – An undertaking intended to extend knowledge through a disciplined inquiry and/or systematic investigation (as defined by TCPS2 [2018] https://ethics.gc.ca/eng/tcps2-eptc2_2018_glossary-glossaire.html).

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POLICY 7.14 – Research Involving Human Participants

applies to research involving human tissue and personal data collected from human participants.
(see: https://ethics.gc.ca/eng/tcps2-eptc2_2018_introduction.html#1)

Western 's Research Ethics Boards (REBs) –

- Non-Medical Research Board (NMREB): reviews research studies that predominately deal with social, behavioral, and cultural research in a non-clinical, non-patient-based population.
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Western University's Health Science Research Ethics Board (HSREB)

Terms of Reference

Preamble

Whereas Western University ("Western") is a research-intensive university with the goal of advancing the creation and dissemination of knowledge;

Whereas Western intends to pursue its role as a research-intensive university in an ethical manner by fulfilling the duties set out in all applicable regulations, guidelines and standards pertaining to human participant protection.;

Whereas Western agrees that ethical research should be guided by the three core principles established by Tri-Council Policy Statement (2018) on the *Ethical Conduct for Research Involving Humans* ("TCPS2"), namely (1) respect for persons, (2) concern for welfare, and (3) justice;

Whereas Western recognizes that the application of these principles is intended to maintain balance between the necessary protection of participants and the legitimate requirements of research;

Whereas TCPS2 requires the creation of an independent research ethics board charged with the task of promoting the ethical pursuit of Western's research objectives;

And whereas Western affirms that the purpose of a research ethics board is to facilitate research with appropriate ethical safeguards;

Now, therefore, Western's Board of Governors enacts as follows:

Creation of the HSREB

1. Western's Health Science Research Ethics Board (the "HSREB") is hereby established.
2. Nothing in this by-law invalidates or otherwise affects any action taken or decision made by a body acting as Western's HSREB prior to the creation of this by-law.

Principles and Applicable Regulations/Guidelines and Standards Pertaining to Human Participant Protection

The HSREBs' mandate, on behalf of Western and its affiliate institutions, is to protect the rights and welfare of human participants who take part in research conducted under the auspices of Western. The HSREBs review such research to ensure that it meets ethical principles and that it complies with all applicable regulations, guidelines and standards pertaining to human participant protection. These include but are not limited to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, 2nd edition (TCPS 2). For clinical trials, the REBs follow the International Conference on Harmonisation Good Clinical Practice Consolidated Guideline (ICH GCP); Part C, Division 5 of the Food and Drug Regulations; Part 4 of the Natural Health Products Regulations; Part 3 of the Medical Devices Regulations, the provisions of the Ontario Personal Health Information Protection Act (PHIPA 2004), and research requirements under O. Reg.329/04. When applicable to the research, the requirements of the U.S. federal regulations to the extent that they exceed the applicable Canadian regulations and guidelines.

3. Except where a contrary intention is expressed in this by-law, the powers, duties, and mandate of the HSREB shall be interpreted and discharged in accordance with TCPS2. For greater certainty, unless a contrary intention is expressed in this by-law; all terms used in this by-law shall be interpreted in accordance with all applicable regulations, guidelines and standards pertaining to human participant protection.

Mandate

4. The HSREB shall review the ethical acceptability of all medical-based research involving humans conducted under Western's jurisdiction or auspices by faculty members, staff or students, regardless of where the research is conducted. This includes (a) rejecting, proposing modifications to, or terminating any proposed or ongoing research involving humans that the HSREB deems to be non-compliant with the applicable regulations, guidelines and standards pertaining to human participant protection, or (b) approving any research that the HSREB deems to comply with the applicable regulations, guidelines and standards pertaining to human participant protection.
5. While all medical-based research involving human participants is subject to review by the HSREB, the HSREB may establish procedures for the "delegated review" of research projects which do not require consideration by the full HSREB. The Chair (or the Chair's delegate in the Office of Human Research Ethics) shall have the discretion to determine which research projects qualify for delegated review, and shall exercise this discretion in accordance with the principles stipulated in the applicable regulations, guidelines and standards pertaining to human participant protection.
6. In pursuit of its mandate, the HSREB shall:
 - (a) establish and communicate policies regarding the ethical conduct of medical research with human participants throughout the research process;
 - (b) contribute to education in research ethics that falls within the HSREB's mandate; and
 - (c) serve the research community and stakeholders as a consultative body regarding matters that fall within the HSREB's mandate.

Authority

7. The HSREB shall act independently of the Board of Governors when making decisions regarding the ethics of research. Neither the Board of Governors nor any other entity may override a HSREB decision to approve, reject, request modifications to, or terminate any proposed or ongoing research.
8. Notwithstanding section 7, the HSREB is accountable to the Board of Governors with respect to the processes the HSREB follows in pursuit of its mandate.
9. At the conclusion of each academic year, the Chair shall submit a report to the Board of Governors regarding the HSREB's activities. This report shall include information regarding the number of protocols reviewed by the HSREB, the number of protocols reviewed by delegated review, the efficiency of the review process and related procedural matters.

Appointment-Chair, Vice Chairs and HSREB members

10. The President, on behalf of the Board of Governors, shall appoint the Chair of the HSREB ("the Chair"). Whenever possible and practicable, the Chair will be selected from experienced HSREB

members who have expressed interest in becoming the Chair and who are familiar with the applicable regulations and guidance documents. The Chair shall oversee the work of the HSREB, consult (where the Chair considers such consultation appropriate) with the Secretariat on Responsible Conduct of Research and the Office of Human Research Ethics to ensure that the HSREB is empowered to carry out its mandate.

11. The Chair shall appoint up to two HSREB members to serve as Vice Chairs of the HSREB (“the Vice Chairs”). The Vice Chairs will assist the Chair in carrying out the Chair’s duties and shall fulfil the role of the Chair when the Chair is not available or where the Chair is prevented from acting by reason of a conflict of interest.
12. The HSREB shall have the power to nominate and appoint its own members and may, subject to section 15, establish nomination and appointment procedures.
13. The HSREB membership selection process shall be fair and impartial, and shall balance the need to maintain continuity of board membership with the need to ensure diversity of opinion, and the opportunity to spread knowledge and experience gained from HSREB membership throughout the institution and community.
14. Where an HSREB member is a faculty member, membership on the HSREB shall be considered part of that member’s service to the Western.
15. The Deans of the Faculties, Hospital Chair Chiefs, or their designator’s shall recommend and/or undertake to facilitate the HSREB’s decisions regarding the appointment of members.
16. In order to ensure that all HSREB members have sufficient knowledge to guide the HSREB in identifying and addressing ethics issues, all HSREB members must complete the online “TCPS2: Course on Research Ethics (CORE) tutorial” before they are eligible to vote at meetings of the HSREB.
17. To ensure the independence of the HSREB’s decision making, institutional senior administrators shall not serve on the HSREB.

Terms of Appointment

18. Each HSREB member will serve for a renewable term of three years for a maximum 3 consecutive terms.
19. A member who is, by reason of section 18, ineligible for reappointment to the HSREB may,
 - (a) retire from the HSREB for 1 year and then be eligible for reappointment, or
 - (b) be reappointed by the Chair in accordance with section 20.
20. The Chair, acting on the advice of the members of the HSREB, may re-appoint a member to the HSREB beyond the expiration of a normal term limit where that member has demonstrated unique skills, abilities, or qualifications essential for the proper operation of the HSREB and the member cannot be suitably replaced.

The term of office of the HSREB Chair is 3 years and is renewable.

Resignations and Removals

21. An HSREB member may resign before the conclusion of his or her term upon provision of notice to the HSREB Chair.
22. The HSREB Chair may remove members of the REB where such members consistently fail to discharge their responsibilities as REB members. The Chair's decision to remove any member is reviewable by the Board of Governors.

Meetings and Attendance

23. The HSREB will schedule bi-monthly meetings throughout the calendar year. Additional meetings may be held as necessary.
24. Subject to any agreement with the Chair concerning to the rotation of members representing individual faculties, HSREB members are expected to attend all regularly scheduled meetings of the HSREB as well as educational events.
25. HSREB members are expected to carry out any delegated review procedures assigned to them by the Chair or their delegate, or to inform the Chair or their delegate immediately if they are unable to undertake a particular delegated review. The Chair (or the Chair's delegate in the Office of Human Research Ethics) shall ensure that any duties associated with delegated review are assigned on an equitable basis.

Quorum

26. Quorum is met when the attendance requirements established in the TCPS2 (Articles 6.4 and 6.9), HC (FDR C.05.010(c) NHRP part 4, s.74), GCP (3.1.2), (U.S. FDA (21 CFR 56.109(e), 21 CFR 312.66, 21 CFR 812.60), DHHS (45 CFR 46.108(b)) are met. The minimum requirements are as follows:
 - a. At least two (2) members with expertise in relevant research disciplines, fields and methodologies covered by the HSREB (for biomedical clinical trials, this will include at least one member who practices medicine or dentistry and who is in good standing with their regulatory body;
 - b. At least one (1) member who is primarily experienced in non-scientific disciplines
 - c. At least one (1) member knowledgeable in ethics;
 - d. At least one (1) member knowledgeable in the relevant law (but that member should not be the institution's legal counsel or risk manager); and
 - e. At least one (1) member knowledgeable in considering privacy issues;
 - f. At least one (1) community member who has no affiliation with the institution.
27. Except when a delegated review procedure is used, the HSREB will review proposed research only at convened meetings at which a Quorum is present.

Conflict of Interest

28. All HSREB members shall disclose any conflicts of interest (actual, apparent, perceived or potential) prior to the review and/or discussion of items on the meeting agenda.
29. All HSREB members shall follow recusal requirements.

Appeals

30. A Principal Investigator (PI) may appeal the decision of the REB if the disagreement between the PI and the REB cannot be resolved through the reconsideration process. A final decision after reconsideration must be issued by the Western's REB before an appeal can be initiated.
31. The same authority that established the REB shall appoint an external to Western appeal committee that reflects a range of expertise and knowledge similar to that of the REB. The appeal committee will meet the REB quorum requirements as applicable to the study under review. Members of the REB whose decision is under appeal shall not serve on that appeal committee.
32. The appeal committee shall have the authority to review negative decisions made by the REB and in doing so it may approve, disapprove, or request revisions to the research proposal. The decision of the appeal committee on behalf of Western is final.

Western University's Non-Medical Research Ethics Board (NMREB)

Terms of Reference

Preamble

Whereas Western University ("Western") is a research-intensive university with the goal of advancing the creation and dissemination of knowledge;

Whereas Western intends to pursue its role as a research-intensive university in an ethical manner by fulfilling the duties set out in the Tri-Council Policy Statement (2018) on the *Ethical Conduct for Research Involving Humans* ("TCPS2");

Whereas Western agrees that ethical research should be guided by the three core principles established by the TCPS2, namely (1) respect for persons, (2) concern for welfare, and (3) justice;

Whereas Western recognizes that the application of these principles is intended to maintain balance between the necessary protection of participants and the legitimate requirements of research;

Whereas TCPS2 requires the creation of an independent research ethics board charged with the task of promoting the ethical pursuit of Western's research objectives;

And whereas Western affirms that the purpose of a research ethics board is to facilitate research with appropriate ethical safeguards;

Now, therefore, Western's Board of Governors enacts as follows:

Creation of the NMREB

1. Western's Non-Medical Research Ethics Board (the "NMREB") is hereby established.
2. Nothing in this by-law invalidates or otherwise affects any action taken or decision made by a body acting as Western's NMREB prior to the creation of this by-law.

Principles and Applicable Regulations/Guidelines and Standards Pertaining to Human Participant Protection

The NMREBs' mandate, on behalf of Western and its affiliate institutions, is to protect the rights and welfare of human participants who take part in research conducted under the auspices of Western. The NMREB reviews such research to ensure that it meets ethical principles and that it complies with all applicable regulations, guidelines and standards pertaining to human participant protection such as TCPS 2.

3. Except where a contrary intention is expressed in this by-law, the powers, duties, and mandate of the NMREB shall be interpreted and discharged in accordance with TCPS2. For greater certainty, unless a contrary intention is expressed in this by-law, all terms used in this by-law shall be interpreted in accordance with the TCPS2.

Mandate

4. The NMREB shall review the ethical acceptability of all non-medical research involving humans conducted under Western's jurisdiction or auspices by faculty members, staff or students, regardless of where the research is conducted. This includes (a) rejecting, proposing modifications to, or terminating any proposed or ongoing research involving humans that the NMREB deems to be non-compliant with the TCPS2, or (b) approving any research that the NMREB deems to comply with the TCPS2.
5. While all non-medical research involving human participants is subject to review by the NMREB, the NMREB may establish procedures for the "delegated review" of research projects which do not require consideration by the full NMREB. The Chair (or the Chair's delegate in the Office of Human Research Ethics) shall have the discretion to determine which research projects qualify for delegated review, and shall exercise this discretion in accordance with the principles enunciated in the TCPS2.
6. In pursuit of its mandate, the NMREB shall:
 - (a) establish and communicate policies regarding the ethical conduct of non-medical research with human participants throughout the research process;
 - (b) contribute to education in research ethics that falls within the NMREB's mandate; and
 - (c) serve the research community and stakeholders as a consultative body regarding matters that fall within the NMREB's mandate.

Authority

7. The NMREB shall act independently of the Board of Governors when making decisions regarding the ethics of research. Neither the Board of Governors nor any other entity may override a NMREB decision to approve, reject, request modifications to, or terminate any proposed or ongoing research.
8. Notwithstanding section 7, the NMREB is accountable to the Board of Governors with respect to the processes the NMREB follows in pursuit of its mandate.
9. At the conclusion of each academic year, the Chair shall submit a report to the Board of Governors regarding the NMREB's activities. This report shall include information regarding the number of protocols reviewed by the NMREB, the number of protocols reviewed by delegated review, the efficiency of the review process and related procedural matters.

Appointment-Chair, Vice Chairs and NMREB members

10. The President, on behalf of the Board of Governors, shall appoint the Chair of the NMREB ("the Chair"). Whenever possible and practicable, the Chair will be selected from experienced NMREB members who have expressed interest in becoming the Chair and who are familiar with the applicable regulations and guidance documents. The Chair shall oversee the work of the NMREB, consult (where the Chair considers such consultation appropriate) with the Secretariat on Responsible Conduct of Research, and work with the Board of Governors and the Office of Human Research Ethics to ensure that the NMREB is empowered to carry out its mandate.
11. The Chair shall appoint a NMREB member to serve as Vice Chair of the NMREB ("the Vice Chairs"). The Vice Chairs will assist the Chair in carrying out the Chair's duties, and shall fulfil the

role of the Chair when the Chair is not available or where the Chair is prevented from acting by reason of a conflict of interest.

12. The NMREB shall have the power to nominate and appoint its own members and may, subject to section 15, establish nomination and appointment procedures.
13. The NMREB membership selection process shall be fair and impartial, and shall balance the need to maintain continuity of board membership with the need to ensure diversity of opinion, and the opportunity to spread knowledge and experience gained from NREB membership throughout the institution and community.
14. Where an NMREB member is a faculty member, membership on the NMREB shall be considered part of that member's service to the Western.
15. The Deans of the Faculties, or their designates, shall recommend and/or undertake to facilitate the HNMREB's decisions regarding the appointment of members.
16. In order to ensure that all NMREB members have sufficient knowledge to guide the NMREB in identifying and addressing ethics issues, all NMREB members must complete the online "TCPS2: Course on Research Ethics (CORE) tutorial" before they are eligible to vote at meetings of the NMREB.
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 - (a) retire from the HNMREB for 1 year and then be eligible for reappointment, or
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20. The Chair, acting on the advice of the members of the NREB, may re-appoint a member to the NMREB beyond the expiration of a normal term limit where that member has demonstrated unique skills, abilities, or qualifications essential for the proper operation of the NMREB and the member cannot be suitably replaced.
21. The term of office of the NMREB Chair is 3 years and is renewable once.

Resignations and Removals

22. An NMREB member may resign before the conclusion of his or her term upon provision of notice to the NMREB Chair.

23. The NMREB Chair may remove any members of the REB where such members consistently fail to discharge their responsibilities as REB member. The Chair's decision to remove any member is reviewable by the Board of Governors.

Meetings and Attendance

24. The NMREB will schedule monthly meetings throughout the calendar year. Additional meetings may be held as necessary.
25. Subject to any agreement with the Chair concerning to the rotation of members representing individual faculties, NMREB members are expected to attend all regularly scheduled meetings of the NMREB as well as educational events.
26. NMREB members are expected to carry out any delegated review procedures assigned to them by the Chair or their delegate, or to inform the Chair or their delegate immediately if they are unable to undertake a particular delegated review. The Chair (or the Chair's delegate in the Office of Human Research Ethics) shall ensure that any duties associated with delegated review are assigned on an equitable basis.

Quorum

27. Quorum is met when the attendance requirements established in the TCPS2 (Articles 6.4 and 6.9) are met. The minimum requirements are as follows:
 - a. At least two members with expertise in relevant research disciplines, fields and methodologies covered by the NMREB;
 - b. At least one member knowledgeable in ethics;
 - c. At least one member knowledgeable in the relevant law (but that member should not be the institution's legal counsel or risk manager); and
 - d. At least one community member who has no affiliation with the institution.
28. Except when a delegated review procedure is used, the NMREB will review proposed research only at convened meetings at which a Quorum is present.

Conflict of Interest

29. All NMREB members shall disclose any conflicts of interest (actual, apparent, perceived or potential) prior to the review and/or discussion of items on the meeting agenda.
30. All NMREB members shall follow recusal requirements.

Appeals

31. A Principal Investigator (PI) may appeal the decision of the REB if the disagreement between the PI and the REB cannot be resolved through the reconsideration process. A final decision after reconsideration must be issued by the Western REB before an appeal can be initiated.
32. The same authority that established the REB shall appoint an external to Western appeal committee that reflects a range of expertise and knowledge similar to that of the REB. The appeal committee will

meet the REB quorum requirements as applicable to the study under review. Members of the REB whose decision is under appeal shall not serve on that appeal committee.

33. The appeal committee shall have the authority to review negative decisions made by the REB and in doing so it may approve, disapprove or request revisions to the research proposal. The decision of the appeal committee on behalf of Western is final.

QUESTIONS FOR SENATE TO BE ADDRESSED DURING QUESTION PERIOD

1. Follow-up: Senate meeting December 2019, Entrepreneurship

J. Toswell, Senator

- a) Below is a question and answer from the Senate meeting in December 2019 (and my thanks to the Secretariat for finding this because I am too far away from my notes). My question for today is whether we have advanced at the undergraduate and graduate level. We now have an entrepreneurship building about to go up, so I am wondering again if entrepreneurship will only be an extra-curricular or co-curricular or community-engaged learning endeavour at Western? My vague impression is that this project has shifted from being a pan-campus endeavour closer to being an Ivey project, so that the new building will be focused on Ivey programs. And here is my question from eighteen months ago, with the response. The presentation from Eric Morse was at the March 2020 Senate meeting, but my question still remains unanswered (in my view):

Entrepreneurship seems to be moving forward rapidly at Western. The President's report to Senate refers to a new building, and the academic leaders' discussion also suggests significant engagement in entrepreneurship across the university, in most or all faculties, and so far among a thousand students. Are there any plans to formalize the university's involvement in entrepreneurship, for example, by bringing a program to Senate? It seems unusual to have a whole new enterprise developing that impacts the research and teaching mission of the university without involving Senate. Perhaps entrepreneurship is moving out of a quiet phase of building support and into a more public phase of consolidating that support and we can expect to see formal projects and programs soon?

Hrymak, Provost & Vice-President (Academic) advised Senators that investment has been made in the area of entrepreneurship on campus. He noted that curricular, extracurricular, co-curricular and other activities that support the entrepreneurship ecosystem at Western will be the focus in the new building. He noted that there has been some discussion about a minor in entrepreneurship and that this would come to Senate at a later date. E. Morse, Executive Director, Pierre L. Morissette Institute for Entrepreneurship will be asked to provide a presentation to Senate at an upcoming meeting.

2. Fall 2021 Return to Campus – Social Distancing

B. MacDougall-Shackleton, Observer

- a) It appears that many classrooms are being booked for full seating capacity, rather than 6' distanced capacity, for September. What is the backup plan should physical distancing measures still be in effect for indoor gatherings?

3. Follow-up: Senate meeting May 2021, Budget Presentation

J. Toswell, Senator

- a) During the budget presentation and in the budget documents there is information about a hiring of 77 tenure-track/probationary faculty, 17 limited-term faculty, and about 250 staff. It is also stated that more specific information is not yet available. Do we now have the specific information so that we can see the breakdown of faculty hires by home faculty, and staff hires by faculty or by academic support unit or by administrative support unit? If faculties are to engage in hiring they should probably be starting on the process now, given the complexities of hiring at the moment?

Note this question was asked (by me, before the minutes made me anonymous) last month. In the answer during the meeting, the acting provost stated that the details could be forthcoming if senators so desired, and the response of senators in the "chat" suggested that they did so desire. (This did not get into the minutes but my notes on the point are pretty detailed.)

4. Fall 2021 Return to Campus – Accessible Education

B. MacDougall-Shackleton, Observer

- a) For courses scheduled to be taught in person, (how) will students be accommodated if they cannot attend in person (for example due to health concerns or international students who are still overseas)? Will the mandate of [Accessible Education](#) be expanded to cover the needs of these students or will such accommodation be downloaded to the instructor?

5. Final Grade Reporting

J. Toswell, Senator

- a) In February 1999, as a result of a SCAPA subcommittee investigating issues of grading and grade distribution at Western, Senate passed a motion requiring that SCAPA provide to Senate an annual report on grades by faculty. Over the next fifteen years or so, this report became steadily more unpopular amongst deans and associate deans, as its principal effect was to cause faculty members to sneer at those from other faculties concerning their grades being too high or too low or too many. Students also pointed out that depending on their faculty they were disadvantaged for scholarships and entrance into their chosen graduate programs. The discussions were not wholly amicable. I'm not exactly sure when this practice ended, but it did have one useful effect, in that once a year we thought about grades. Last year at this time I asked a question about final grades as issued in April 2020, wondering if they were in any way different from the norm because of our pivot to emergency remote learning. The response was that grades were not yet clear in June 2020 and changes kept being made, and this was not possible. This year I hesitate to ask if we have any definite results on 2020 but I feel I should try, and I wonder if we have any preliminary results on 2021 to ponder. As the academic decision-making body of the university, Senate should be interested in grades.