McGILL UNIVERSITY SENATE



Report of the Academic Policy Committee D15-57

473rd REPORT OF THE ACADEMIC POLICY COMMITTEE TO SENATE

On the APC meeting held on April 21st 2016

I. TO BE APPROVED BY SENATE

(A) NEW TEACHING PROGRAMS REQUIRING SENATE APPROVAL

School of Continuing Studies

Graduate Certificate in Teaching in Indigenous Schools for Non-Indigenous Teachers (15 cr.) – Appendix A

At a meeting on April 21st 2016, APC reviewed and approved this new program, which will offer professional development for in-service non-Indigenous teachers to become effective teachers in First Nations and Inuit communities. The program addresses subjects of particular interest and need, such as cultural socialization, culturally appropriate teaching strategies, second language teaching, and the history of First Nation and Inuit cultures and peoples. Applicants will normally be employed as a teacher by the appropriate Indigenous teaching authority or community education committee, and be recommended by the school principal and an officer of the authority/committee.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed Graduate Certificate in Teaching in Indigenous Schools for Non–Indigenous Teachers.

Professional Development Certificate in Business Analysis (33-35 CEUs) – Appendix B

At a meeting on April 21st 2016, APC reviewed and approved this new program, which will particularly attract students who have already taken the existing Comprehensive Business Analysis course offered by the School since 2011. Currently, there is no English certificate program offered on this subject in Montreal, providing SCS with a competitive edge. The main objective of the program is to equip professionals with the knowledge and skills necessary to be effective business analysts: to understand business problems, recognize opportunities, and recommend solutions, as well as to act as a liaison among business stakeholders to elicit, analyze, communicate, and validate requirements for changes to business processes, policies, and information systems.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed Professional Development Certificate in Business Analysis.

Faculty of Education

Bachelor of Arts (Education); Major in Education in Global Contexts (90 cr.) – Appendix C

At a meeting on April 21st 2016, APC reviewed and approved a proposal for a new B.A (Education) in Education in Global Contexts. This new degree program will fill the need for educators outside the traditional formal school systems, as it will prepare students for changing employment within a changing global landscape. It is intended to equip students with a strong grounding in educational theory, issues, and challenges, with an emphasis on building in-depth understandings of key issues facing education in diverse global contexts. A foundational program, it will provide a variety of pathways for future study or employment in a range of government, educational, industry, and community organizations. It is a general degree in education that mirrors the B.A. program in Liberal Arts and will not lead to teacher certification for formal elementary/secondary classroom teaching in Quebec. Ministry approval is also required for this new degree program.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed Bachelor of Arts (Education), Major in Education in Global Contexts.

Faculty of Medicine

Graduate Certificate in Surgical Innovation (15 cr.) – Appendix D

At a meeting on April 21st 2016, APC reviewed and approved this new program, which has been designed to provide innovative training with an emphasis on the process of team-based surgical device innovation. It is especially geared towards candidates with a high interest in surgically oriented processes but who may be unable to commit to a Master's degree. It is open to health care and research professionals, surgical and medical residents, pharmacists, nurses, and those with an undergraduate GPA of 3.0 or higher in the medical and allied sciences, or two or more years' experience in the medical sector.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed Graduate Certificate in Surgical Innovation (15 cr.)

- (B) ACADEMIC PERFORMANCE ISSUES / POLICIES / GOVERNANCE/AWARDS none
- (C) CREATION OF NEW UNITS / NAME CHANGES / REPORTING CHANGES none
- (D) CHANGES IN DEGREE DESIGNATION none
- (E) INTER-UNIVERSITY PARTNERSHIPS none
- (F) OTHER

Office of the Associate Provost (Policies, Procedures, and Equity) Guidelines for Developing a Research Portfolio – Appendix E

At a meeting on April 21st 2016, APC reviewed and approved the proposed Guidelines for Developing a Research Portfolio. With a view to supporting professors who are preparing research portfolios for inclusion within reappointment, tenure or promotion applications, the Guidelines have been prepared as a useful, advisory tool for the McGill professoriate. It is also being proposed to be included as an Appendix to McGill's *Regulations Relating to the Employment of Tenure Track and Tenured Academic Staff*.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve, and recommend to the Board of Governors for approval the addition of Appendix B, Research Portfolio Guidelines, to the Regulations Relating to the Employment of Tenure Track and Tenured Academic Staff.

II. TO BE ENDORSED BY SENATE / PRESENTED TO SENATE FOR DISCUSSION – none

III. APPROVED BY APC IN THE NAME OF SENATE

- (A) **DEFINITIONS** none
- (B) STUDENT EXCHANGE PARTNERSHIPS / CONTRACTS / INTERUNIVERSITY PARTNERSHIPS none
- (C) OTHER none

IV. FOR THE INFORMATION OF SENATE

- A) ACADEMIC UNIT REVIEWS none
- B) APPROVAL OF COURSES AND TEACHING PROGRAMS

1. Programs

- a) APC Approvals (new options/concentrations and major revisions to existing programs)
 - i. New Programs none
 - ii. Major Revisions of Existing Programs

 Graduate and Postdoctoral Studies/Faculty of Arts
 Ph.D. in Anthropology (0 cr.)
- **b)** APC Subcommittee on Courses and Teaching Programs (SCTP) Approvals (Summary Reports: http://www.mcgill.ca/sctp/documents/)
 - i. Moderate and Minor Program Revisions
 Approved by SCTP on 10th March 2016 and 24th March 2016, reported to APC on 21st April 2016

Faculty of Dentistry

D.M.D. (218.5 credits)

Graduate and Postdoctoral Studies

M.A. in Linguistics; Non-Thesis (45 cr.)

Ph.D. in Linguistics (0 cr.)

M.Eng. in Biological and Biomedical Engineering (45 cr.)

Ph.D. in Biological and Biomedical Engineering (0 cr.)

M.Sc. in Microbiology and Immunology (45 cr.)

Ph.D. in Microbiology and Immunology (0 cr.)

M.Sc.(A.) in Occupational Therapy; Non-Thesis (58 cr.)

M.Mus. in Performance; Jazz Performance (45 cr.)

Faculty of Science

B.Sc.; Minor in Geographic Information Systems and Remote Sensing (18 cr.)

B.Sc.; Minor in Interdisciplinary Life Sciences (24 cr.)

ii. Program Retirements

Approved by SCTP on 10th March 2016, reported to APC on 21st April 2016

Graduate and Postdoctoral Studies

Graduate Diploma in Library and Information Studies (30 cr.)

2. Courses

a) New Courses

Reported as having been approved by SCTP on 10th March 2016 and 24th March 2016: 12

Faculty of Dentistry: 1 Faculty of Education: 1 Faculty of Engineering: 1

Graduate and Postdoctoral Studies: 5

Schulich School of Music: 1 Faculty of Science: 3

b) Course Revisions

Reported as having been approved by SCTP 10th March 2016 and 24th March 2016: 21

Faculty of Agricultural and Environmental Sciences: 2

Faculty of Dentistry: 1 Faculty of Education: 3 Faculty of Engineering: 5 Faculty of Science: 10

c) Course Retirements

Reported as having been approved by SCTP on 10th March 2016 and 24th March 2016: 6

Faculty of Education: 3
Faculty of Science: 3

(B) OTHER

Office of the Associate Provost (Policies, Procedures, and Equity)

Examples of the Range of Research Accomplishments, Recognition and Impacts Valued at McGill – Appendix F

At a meeting on April 21st 2016, APC reviewed and discussed a document that supplemented the Guidelines for Developing a Research Portfolio, which provided examples to reflect the diversity of research accomplishments, recognitions and impacts valued within the University community. It is expected to serve as a living document that will expand over time to reflect evolutions and innovations in academic research. Examples enumerated were intended to be illustrative, providing guidance to those preparing and evaluating research portfolios. The examples did not constitute an exhaustive or definitive list of recognized and valued research activities and outcomes and no example cited would, by itself, necessarily be determinative of a reappointment, tenure or promotion application.

Subcommittee on Courses and Teaching Programs (SCTP) Program Retirement and Reinstatement Process

At a meeting on April 21st 2016, APC reviewed and approved a process for reinstating retired programs. As no process currently exists, one was drafted by SCTP in the event that the University requests Faculties/Schools retire low-enrolment/obsolete programs. Every 3-5 years, SCTP will provide Deans with a list of programs within their Faculty/School that are indicated in the current eCalendar as "not offered", "under review", or "closed for admissions". A deadline will be indicated for Deans to respond. Deans will then be asked to provide a short rationale for programs they choose not to retire. The retirement of programs selected by the Deans will be reported to Enrolment Services and to Graduate and Postdoctoral Studies if at the graduate level. A program that has been retired for no more than 5 years may be reinstated. Criteria for the reinstatement of a retired program are set at the discretion of each Dean. Any program that has been retired for more than 5 years may not be reinstated and it should be considered as a new program. Therefore, a new program proposal would be needed that would follow the usual approval process for new programs.



McGill New Program/Major or Minor/Concentration Proposal Form

(2013)2.0 Administering Faculty/Unit 1.0 Degree Title Please specify the two degrees for concurrent degree programs School of Continuing Studies Graduate Certificate 1.1 Major (Legacy= Subject)(30-char. max.) Offering Faculty/Department Education/Department of Integrated Studies in Education Teaching in Indigenous Schools for Non-Indigenous Teachers 1.2 Concentration (Legacy = Concentration/Option) 3.0 Effective Term of Implementation If applicable to Majors only (30 char. max.) (Ex. Sept. 2004 = 200409) Term 201609 1.3 Minor (with Concentration, if Applicable) (30 char. max.) 4.0 Rationale and Admission Requirements for New Proposal SEE LAST PAGE FOLLOWING APPROVALS 5.0 ogram Information Please check appropriate box(es) 5.1 Program Type 5.2 Category 5.3 Level Bachelor's Program Faculty Program (FP) Undergraduate Master's Dentistry/Law/Medicine M.Sc. (Applied) Program Joint Major Continuing Studies (Non-Credit) Dual Degree/Concurrent Program ☐Major Concentration (CON) **Collegial** Minor Masters & Grad Dips & Certs Certificate Minor Concentration (CON) Doctorate Diploma Honours (HON) Post-Graduate Medicine/Dentistry X Graduate Certificate Joint Honours Component (HC) Graduate Qualifying ☐ Graduate Diploma ☐ Internship/Co-op Postdoctoral Fellows Ph.D. Program 5.4 FQRSC (Research) Indicator Thesis (T) Doctorate Program (for GPS) Yes No Non-Thesis (N) (Other than Ph.D.) Private Program Off-Campus Program Distance Education Program (By Correspondence) Other (Please specify) 6.0 Total Credits 7.0 Consultation with Related Units Yes 🗷 No 15 Financial Consult Yes No Attach list of consultations.

8.0 Program Description (Maximum 150 words)

This 15-credit Graduate Certificate Program offers professional development for in-service non-Indigenous teachers supporting their growth as more effective teachers in First Nations and Inuit communities. The program addresses subjects of particular interest and need in First Nations and Inuit schools, such as cultural socialization, culturally appropriate teaching strategies, second-language teaching, and the history of the culture and its people.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Graduate Certificate in Teaching in Indigenous Schools for Non-Indigenous Teachers (15 Credits)

Required Courses (15 credits)

EDEC 590 Culturally Appropriate Teaching Styles (3 credits)

EDEC 591 Cultural Values and Socialization (3 credits)

EDEM 502 Native Family Dynamics & Supporting Institutions (3 credits)

EDEM 503 Research Seminar in Indigenous Studies (3 credits)

EDSL 505 Second Language Acquisition Applied to Classroom Contexts (3 credits)

PROJ. 16.1

10.0 Approvals			
Routing Sequence	Name	Signature	Date
Department	Dr. Steve Jordon	(on	8-12-2015
Curric/Acad Committee	Prot Elizabeth Wood		Dec 15 2015
Faculty 1 CONT. STUD	DR. JUDITH POTTER	WIT	JAN. 4, 2016
Faculty 2			
Faculty 3			
CGPS	<u> </u>	·	
SCTP	ADDROVED		Feb. 11, 2016
APC		APC APPROVED	April 21, 2016
Senate			
Submitted by			
Name		To be completed by ARR:	
Phone		CIP Code	
Email			
Submission Date			

RATIONALE:

Note that this graduate certificate does not lead to teacher certification. In consultation with the partners of the Office of First Nations and Inuit Education, there is a strong desire to offer professional development to in-service non-Indigenous teachers in order to better prepare them to be effective teachers in their respective Indigenous communities. The 15-credit Graduate Certificate is attainable within the average tenure of a non-Indigenous teacher. Communities recognize that turnover may be due to the fact that most university teacher preparation programs inadequately prepare new teachers for the culturally distinct nature of the teacher undertaking in First Nations and Inuit classrooms. In response, a graduate-level certificate has been developed that replaces the previous 30-credit Certificate in Aboriginal Education for Certified Teachers, making it more relevant while increasing the academic challenge. Admissions Requirements: Applicants will normally be employed as a teacher by the appropriate indigenous teaching authority or community education committee, and be recommended by the school principal and an officer of the authority/committee. The right of final decision for acceptance of candidates rests with McGill. An undergraduate degree from a recognized university with a minimum standing equivalent to a CGPA of 3.0/4.0 is required. Non-Canadian students from countries where English is not the first language and who have not completed a degree at a recognized English university must provide proof of English Proficiency. A TOEFL minimum score of 90 overall (minimum individual score of 21 in each of 4 components) is required. The proposing unit has considered reviewing, revising, or retiring any obsolete existing programs.

D15-57 Appendix B



			ø.	(07/2004
Degree Title Please specify the two degrees for contact the second sec	ncurrent degree	2.0 Administerin	g Faculty/Unit	***************************************
programs Professional Development Certificate	9	School of Con	ntinuing Studies	
1.1 Major (Legacy= Subject)(30-char. max		Offering Fac	ulty/Department	
Business Analysis		***************************************	nd Professional Dev	velonment
1.2 Concentration (Legacy = Concentration If applicable to Majors only (30 char. n			m of Implementat 004 = 200409)	ion
		201609	,	
1.3 Minor (with Concentration, if Applicable	e) (30 char. max.)			
Business Analysis is one of the fastest growing profesince 2011. We are now proposing to introduce a nocompetitive edge as there is currently no Business A students seeking a certificate in the growing field of I graduates to return to McGill to earn a professional of The CPD Department reviews, revises, or retires any hold a Quebec CEGEP diploma (DEC, DCS, or equi admitted as a mature student.	n-credit Professional Develonalysis certificate program of Business Analysis, motivate development certificate. It wisting programs that are	opment Certificate in Busine offered in English in Montre existing students to comple obsolete or have low enrol	ess Analysis that will preal. This new program vete more than one coulument. Admission Requ	rovide SCS with a distinct will help attract new rse, and encourage uirements: Applicants must
5.0 Program Information				
Please check appropriate box(es)				
5.1 Program Type	5.2 Category		5.3 Level	
☐ Bachelor's Program	☐ Faculty Program	(FP)	☐ Undergradual	
Master's	☐ Major		☐ Dentistry/Law	
☐ M.Sc. (Applied) Program	☐ Joint Major		Continuing Ed	d (Non-Credit)
☐ Dual Degree/Concurrent Program	☐ Major Concentra	ition (CON)	☐ Collegial	10: 00 1
☐ Certificate	☐ Minor		☐ Masters & Gr	ad Dips & Certs
☐ Diploma	☐ Minor Concentra	ition (CON)	☐ Doctorate	
☐ Graduate Certificate	☐ Honours (HON)			te Medicine/Dentistry
☐ Graduate Diploma	☐ Joint Honours Co		☐ Graduate Qua	, 0
☐ Ph.D. Program	☐ Internship/Co-op)	☐ Postdoctoral	reliows
☐ Doctorate Program	☐ Thesis (T)			
(Other than Ph.D.)	□ Non-Thesis (N)			
☐ Private Program	☐ Other			
☐ Off-Campus Program	Please specify			
☐ Distance Education Program				
(By Correspondence)				
▼ Other (Please specify)				
Professional Development Certificate				
6.0 Total Credits/CEUs		7.0 Consultation wi	***************************************	
- Control of October 1970		Related Units	Yes	No X
33 – 35 CEUs		Financial Cons	ult Yes	No 😨
		Attach list of co		

8.0 Program Description (Maximum 150 words)

The main objective of the Professional Development Certificate in Business Analysis is to equip professionals with the knowledge and skills necessary to be effective business analysts: to understand business problems, recognize opportunities, and recommend solutions; and to act as a liaison among business stakeholders to elicit, analyze, communicate, and validate requirements for changes to business processes, policies, and information systems. Emphasis is placed on practical application of business analysis principles, tools, and methodology as outlined in the industry standard, *A Guide to the Business Analysis Body of Knowledge® (BABOK®Guide)*, and on the development of critical interpersonal skills, including communication, teamwork, conflict resolution, and facilitation. This program is offered in English and must be completed within 2 years.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Professional Development Certificate in Business Analysis (33 – 35 CEUs)

Required Courses (25 CEUs)

CBUS 210D1/D2 Comprehensive Business Analysis (16 CEUs) CBUS 216 Interpersonal Skills for Professionals (4.5 CEUs)

CBUS 242 Applied Business Analysis (4.5 CEUs)

Complementary Courses (8 - 10 CEUs)

8-10 CEUs from the following:

CENG 224 Agile Project Management (4 CEUs)

CBUS 221 Leading Sustainable Change (6 CEUs)

CCOM 208 Professional Writing in Business (4 CEUs)

CBUS 243 Introduction to Business Analytics and Data Modeling (4 CEUs)

10.0 Approvals			
Routing Sequence	Name	∠ Signature'	Date
Department	Kamai Salmasi. Area Coord. Mom. IB. Entr.	Settier	MARCH 24 2016
Curric/Acad Committee	Carmen Sicilia. Associate Dean	Romals	APRIL 4, 2016
Faculty 1	Judith Potter. Dean of Continuing Studies	AW	APRIL 4, 2016
Faculty 2	Carmen Sicilia, Program Committee Chair,a.i.	The all	March 24, 2016
Faculty 3	CAHD.		
SCTP			Apr. 7,2016
GS	ADDRAVED	And the state of t	1,0010
APPC		APC APPROVED	April 21, 2016
Senate			
Submitted by			
Name	Inna Ponova	To be completed by ARR:	
Phone	514-398-6227	CIP Code	
Email	Inna.popova@mcdill ca	on odds	
Submission Date	22 March 2016		



Proposal Form

					(07/2004)
Degree Title Please specify the two degrees for programs	concurrent degree	2.0 Admin	istering Facu	ilty/Unit	
Bachelor of Arts(Education)		Faculty	of Education		-
1.1 Major (Legacy= Subject)(30-char. r	nax.)	Offerin	g Faculty/De	partment	
Education in Global Contexts		Educati	on / Integrated	f Studies in Educ	ation
1.2 Concentration (Legacy = Concentra If applicable to Majors only (30 cha			ept. 2004 = 2	mplementation (00409)	
1.3 Minor (with Concentration, if Applic	able) (30 char. max.)	201703			
4.0 Rationale for new proposal					
There is a strong need for educators outside employment within a changing global lands teachers in the English school community is speaking teachers in Quebec. The cost of Mayment of practicum supervisors; this chateacher education will ensure: a) selective our teacher education programs. Admission requirements for the B.A. (Education CEGEP will complete 90 credits; stude guidelines for U0 B.Ed students.	scape. Moreover, with the standard diminishing. McGill there McGill's teacher education and the same as ation) will be the same as	ne present socio-lingurefore recognizes its on programs is extrem rograms that do not inducation, b) the high	uistic context in ethical respons yely high, due t require certific est program qu n. programs in	n Quebec context, sibility to graduate o the accreditatic ation. A decrease uality; and c) exce the Faculty of Art	the need for certified e fewer English- on requirement for e in numbers for ellence in reputation of s. Students entering
5.0 Program Information					
Please check appropriate box(es)			601.		
5.1 Program Type	5.2 Category	rue acci	5.3 Le		
X Bachelor's Program	Faculty Program	(FP)		Undergraduate	
Master's	X Major			ntistry/Law/Medicin	
M.Sc. (Applied) Program	Joint Major			ntinuing Ed (Non-C	redit)
Dual Degree/Concurrent Program	Major Concentrat	tion (CON)		llegial	
Certificate	Minor	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		isters & Grad Dips &	& Certs
Diploma	Minor Concentrat	tion (CON)		ctorate	
Graduate Certificate	Honours (HON)			st-Graduate Medici aduate Qualifying	ne/Dentistry
Graduate Diploma	Joint Honours Co			stdoctoral Fellows	
Ph.D. Program	Internship/Co-op		Po	Studictoral reliows	
Doctorate Program	Thesis (T)				
(Other than Ph.D.)	Non-Thesis (N)				
Private Program	Other				
Off-Campus Program	Please specify				
Distance Education Program					
(By Correspondence)					
Other (Please specify)					
1					
6.0 Total Credits		7.0 Consulta Related I		X Yes	No
		F F S 500	Jnits	X Yes X Yes	No No

8.0 Program Description (Maximum 150 words)

The B.A.(Education); Major in Education in Global Contexts is intended to equip students with a strong grounding in educational theory, issues, and challenges, with an emphasis on building in-depth understandings of key issues facing education in diverse global contexts. A foundational program, it provides a variety of pathways for future study or employment for our students in a range of government, educational, industry, and community organizations. Students complete a 54 credit major in Education in Global Contexts addressing the core of the program, with the addition of an 18 credit minor in a complementary discipline (choice of 3 approved minors), and complete the degree with 18 credits of electives. The program includes an internship and opportunities for applied research. This program is a general degree, mirroring the "Liberal Arts" degree, but specifically in the area of Education.

NOTE: This program does not lead to Teacher Certification for formal elementary/secondary classroom teaching in the province of Quebec.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Proposed Bachelor of Arts(Education); Major in Education in Global Contexts (90 credits)

Required Courses (42 cr)

EDEC 233 First Nations and Inuit Education (3 cr)

EDEC 249 Global Education and Social Justice (3 cr)

EDEC 260 Philosophical Foundations (3 cr)

EDEM 220 Contemporary Issues in Education (3 cr)

EDGC 200 Knowledge through the Arts (3 cr)

EDGC 201 Media, Learning, and Digital Youth Cultures (3 cr)

EDGC 299 Research Methods (3 cr)

EDGC 301 Program Design and Evaluation (3 cr)

EDGC 399 Internship Project (3 cr)

EDGC 400 21st Century Learning (3 cr)

EDGC 499 Critical Research Inquiry (3 cr)

EDPE 300 Educational Psychology (3 cr)

EDPI 341 Instruction in Inclusive Schools (3 cr)

EDSL 500 Foundations and Issues in Second Language Education (3 cr)

Complementary Courses (30 cr)

12 credits from the following; no more than 9 credits from one specific list. Other courses on these topics from the Faculty of Education or other Faculties may be selected subject to approval of program advisor.

Leadership and Social Change

EDER 461 Society and Change (3 cr)

EDGC 312 Understanding Teacher Leadership (3 cr)

EDGC 313 Cultivating Process of Social Transformation (3 cr)

EDGC 411 Affect, Education, and Social Change (3 cr)

EDGC 412 Historical Knowledge: Tool for Agents of Change (3 cr)

EDGC 300 Special Topics (3 cr) (when topic is relevant to this list)

Ethics, Wellbeing, and Diverse Knowledge Approaches

EDER 494 Human Rights & Ethics in Practice (3 cr)

EDGC 222 Integrating Arts into STEM (3 cr)

EDGC 324 Physical Health and Wellbeing in Education (3 Cr)

EDGC 423 Human Knowledge Claims and Education (3 cr)

EDSL 390 Teaching English as a Second Language in the Community (3 cr)

EDGC 300 Special Topics (3 cr) (when topic is relevant to this list)

Critical Issues in Education

EDGC 233 Learning in Out-of-School Contexts (3 cr)

EDGC 335 Eco-Justice and Sustainability in Education (3 cr)

EDGC 336 Race, Class, and Power in Education in Global Contexts (3 cr)

EDGC 337 Gendered Identities, Social Learning (3 cr)

EDGC 300 Special Topics (3 cr) (when topic is relevant to this list)

Children and Youth

EDGC 244 Investigating Children's Reasoning (3 cr)

EDGC 348 Global Perspectives of Early Childhood Education (3 cr)

EDGC 444 Critical Contexts of Youth Development (3 cr)

EDGC 300 Special Topics (3 cr) (when topic is relevant to this list)

New Program/Major or Minor/ Concentration Proposal Form P1-3

Continued on next page.

(continued)

One of the following approved minors:

B.Com.; Minor in Management for Non-Management Students B.A.; Minor Concentration in International Development Studies

B.A., Minor Concentration in Educational Psychology

Subject to approval of program advisor, students in a minor offered by the Faculty of Education (i.e. Educational Psychology) may be granted permission to complete a second minor from the above list in order to fulfill the requirement of 18 credits of elective courses.

Elective Courses (18 cr.)

18 credits of electives selected from Faculty of Education offerings. Exceptionally, students may be permitted to take courses elsewhere in the University with permission of the program advisor.

10.0 Approvals Routing Sequence	Name	Signature	Date
Department Curric/Acad Committee Faculty 1 Faculty 2	Deot. Chair Associate Dean Dilson Rassier Dean SCTP		March 23, 2016
Faculty 3 SCTP GS	PPROVED		Apr. 7, 2016
APPC Senate		APC APPROVED	April 21, 2016
Submitted by			
Name		To be completed by ARR:	
Phone Email		CIP Code	
Submission Date		New Program/Major or Minor/ Concentrati	on Proposal Form P1-4





B.A. (Education) Major: Education in Global Contexts

ELIZABETH WOOD
ASSOCIATE DEAN, ACADEMIC PROGRAMS
FACULTY OF EDUCATION
APRIL, 2016

Presentation overview

- 1. Context
- 2. Program Rationale
- 3. B.A (Education) Education in Global Contexts
 - ▶ Program Parameters:
 - ▶ Overview of 90-credit B.A. program
 - ▶ Minor Concentrations
- 4. Consultation
- 5. Approval Timelines
- 6. Questions

1. Context

- Initiated with 2009 Undergraduate Program Revisioning (UPR), a major benchmarking research exercise, seeking to optimize Faculty of Education UG program quality and relevance.
- UPR report proposed 12 recommendations, including:
 - Develop a 1-2 year consecutive teacher education program (MATL) (completed 2010)
 - ✓ Increase French offerings (completed 2014)

Reduce and Diversify

Reduce B.Ed by at least 50% Introduce New B.A.

(The above two critical and complementary actions have not been possible until now.)

2. Program Rationale

Ethical responsibility to graduate fewer Englishspeaking elementary and secondary school teachers in Quebec:

Quebec socio-cultural context (diminishing English population, decreasing numbers of English schools) leading to urgent need to reduce teacher education graduation numbers in English sector (reduce admissions into teacher education programs) Even English school boards now require bilingual teachers The Faculty of Education considers it to be unethical for McGill to continue to produce present numbers of English teacher education graduates.

2. Growing shortage of teacher education field placements

English school closures, and growing numbers of French immersion classrooms in English sector, lead to parallel shortage of field placements for English teacher education student teachers. This is reaching critical proportions.

Rationale (cont'd)

3. Unknown future employment needs locally & globally:

As the future for educational needs remain unknown, employment contexts globally are impacted by immigration, evolving markets, shifting institutional authorities, societal changes (relationships between school, state, industry), and local and global socio-political contexts, communities, families.

4. New global era for Education graduates, in demand across various sectors:

This changing global and employment landscape opens the way for a growing need for a broad-based, nimble "liberal arts" - or rather a "liberal education" degree such as this B.A. (Education). Education specialists outside formal school contexts will work in government agencies, community organizations, and industry, both locally and internationally.

Rationale (cont'd)

5. Faculty of Education Strategic Plan:

Cost of program

The introduction of this new program maps a significant shift in the Faculty's strategic plan. Still drawing on Faculty of Education expertise, preparing educators for the future, the new B.A. (Education) does not require remunerated supervision of 800 hours of teacher education field experiences per student, and therefore will be far less costly. The financial challenge of teacher education programs will be mitigated by a reduction in teacher education numbers, offset by this new B.A. (Education) program responding to a critical need for educators locally and globally

Higher selectivity / Higher quality of graduates

This long-awaited strategic decrease in numbers in teacher education will ensure a) selective admissions for teacher education, b) highest program quality; and c) excellence in reputation of our teacher education programs.

3. Program Parameters

B.A. (Education) Education in Global Contexts

- Admission target of 30 students per year, for first 5 years
- Admission standards same as Faculty of Arts
- ▶ B.A. (Education) designation rather than B.ED in order to differentiate from school-based professional contexts
- Due to Education focus, will attract NEW students to McGill, not competing with existing BA applicants
- Students will be asked to select one of three approved minor concentrations (see subsequent slides)
- Students will be asked to apply directly to minors, respecting specific admissions requirements for these minors
- Program provides foundation for multiple pathways for graduates into future academic/professional work in a range of academic disciplines and professions

Overview of 90-credit program

54 credits Education

required (Common core)

18 credits

Select minor concentration

(one of three existing McGill minors)

18 credits electives and/or complementary courses

Students select one of 3 existing 18-credit McGill minors:

- a) Educational Psychology (Faculty of Education)
- b) International Development (Faculty of Arts)
- c) Management (for non-management majors) (Faculty of Management)



In addition to required Education courses, and official minor concentration, students will select from a wide range of elective/complementary courses (18 credits) including the following areas related to Global Education

- French language education: Programme d'immersion française (PIF)
- Arts & technology in Education
- Contemporary educational issues: differentiation, language, accommodation, sustianability education, social justice education
- Critical pedagogy and issues of race, gender, sexuality in Education
- Second language education in community
- First Nations contexts for global understanding in Education
- 21st century teaching and learning
- Health and Physical Education
- Historical consciousness and Education

4. Consultation

- a) Faculty of Education internal consultation and approvals 2015-16
- b) University (to date)
 - Provost C. Manfredi (first as Dean of Arts, then as Provost in discussio with Dean Rassier, Faculty of Education)
 - Ollivier Dyens, VP Student Life and Learning
 - Hudson Meadwell, Dean; Gillian Lane-Mercier, Assoc. Dean Academic Programs (Fac. of Arts)
 - Morty Yalovsky, Vice-Dean; Steve Fortin, Assoc. Dean Academic Programs (Fac. of Management)
 - Presently working in collaboration with Real Del Degan regarding development and approval of program's business plan (University Finance)
 - Presently working in collaboration with Philip Smith/ Victor Arshad, regarding Ministry approval

5. Approval timelines

- University approval: Spring 2016
 - ✓ SCTP April 5
 - APC April 19
 - Senate May 11
- Development & translation of new program (Ministry request for approval) March-Sept 2016
- Submission to Ministry of B.A. (Education) new program proposal: September 2016
- Program launch with first cohort: Sept 2017

6. Questions and discussion

Thank you

Image credits

Sky image at https://search.yahoo.com/yhs/search?p=image+of+blue+sky&ei=UTF-8&hspart=mozilla&hsimp=yhs-003

Globe image at https://images.search.yahoo.com/images/view



Proposal Form

			(20	13
Degree Title Please specify the two degrees for co- programs	ncurrent degree	2.0 Administerii	ng Faculty/Unit	
Graduate Certificate		GPS		
1.1 Major (Legacy= Subject)(30-char. max	x.)	Offering Fa	culty/Department	
Surgical Innovation		Medicine/	Surgery	
1.2 Concentration (Legacy = Concentration If applicable to Majors only (30 char. r			erm of Implementation 2004 = 200409)	
1.3 Minor (with Concentration, if Applicable	e) (30 char. max.)	201609		
4.0 Rationale and Admission Requiremen	its for New Proposal			
SEE LAST PAGE				
5.0 Program Information				
Please check appropriate box(es)	F 0 0 1		501	
5.1 Program Type Bachelor's Program	5.2 Category Faculty Program	. (ED)	5.3 Level	
Master's	Major	I (FF)	Undergraduate Dentistry/Law/Medicine	
M.Sc. (Applied) Program	Joint Major		Continuing Studies (Non-Credit)	
Dual Degree/Concurrent Program	Major Concentra	ation (CON)	Collegial	
Certificate	Minor	ation (CON)	X Masters & Grad Dips & Certs	
Diploma	Minor Concentra	ation (CON)	Doctorate	
X Graduate Certificate	Honours (HON)	ation (CON)	Post-Graduate Medicine/Dentistry	
Graduate Diploma	Joint Honours C	omnonant (HC)	Graduate Qualifying	
Ph.D. Program	Internship/Co-o		Postdoctoral Fellows	
Doctorate Program	Thesis (T)	P	5.4 FQRSC (Research) Indicator	
(Other than Ph.D.)	Non-Thesis (N)		(for GPS) Yes No	
Private Program	Other			
Off-Campus Program	Please specify			
Distance Education Program	riease specify			
(By Correspondence)				
Other (Please specify)				
Other (Flease specify)				
6.0 Total Credits		7.0 Consultation w	and the second s	7
15		Related Units	Yes NoX	**************************************
		Financial Cons	sult Yes No X onsultations. Did consult Real del Degan	Property and an artist of the second
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The core of this 15 credit graduate program is two innovation courses (EXSU 620-621) delivered by McGill Department of Surgery and with some sessions by external partners: John Molson School of Business (lean start-up), Concordia (software design), Local Industry (Regulatory & IP) and ETS (protoyping). The first semester of the program core focuses on team building and, supported by lectures, the students embark on a needs finding process by observing all aspect of clinical activity in their focus themes. The trainees learn basic prototyping skills, start up organization and project management. This is supplemented by a basic stats course and an introduction to the current status of biomedical research innovation. This certificate then gives a solid foundation in the innovation process.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

REQUIRED COURSES (12 credits)

EXSU 605 Biomedical Research Innovation (3 cr.)

EXSU 606 Statistics for Surgical Research (3 cr.)

EXSU 620 Surgical Innovation 1 (3 cr.)

EXSU 621 Surgical Innovation 2 (3 cr.)

Elective COURSES (3 credits)

3 CREDITS AT THE 500 LEVEL OR HIGHER, CHOSEN IN CONSULTATION WITH THE PROGRAM DIRECTOR.

Some courses may be substituted with equivalents if timetabling requires it.

10.0 Approvals			
Routing Sequence	Name	Signature	Date
Department	Gerald M. Fried. MD	Je Cornell	March 3. 2016
Curric/Acad Committee	Anie Philio, PhD	19224	March 3, 1016
Faculty 1	DAVID RAGSDALE	24	March 22 201
Faculty 2			
Faculty 3			
CGPS	CATD	CGPS APPROVAL	APR. 18, 2016
SCTP			Apr. 7, 2016.
APC	APPROVED!	APC APPROVED	April 21, 2016
Senate			
-contained			
Submitted			
by C A			
Name	Jake Barralet	To be completed by ARR:	
Phone	514-3983908	CIP Code	
Email	iake.barralet@mcolil.ca		
Submission Date	Feb 26th 2016		
PRODUCENAMA			
UQUIARAAAAAAA			

RATIONALE:

Graduate research training in surgery has traditionally been served by the Experimental Surgery Research Masters and PhD thesis programs. The skills required within the realm of surgical research can no longer only be met by the present curriculum in Experimental Surgery. A more tailored approach is in line with the particular research expertise and interest within the Department of Surgery and the candidates. 3 concentrations have been developed, Innovation, Education and Global Health. The core of teaching of the Innovation Concentration revolves around a needs finding and refinement process followed by brainstorming and prototype development. This is a highly surgically orientated process in which many residents are interested but are unable to commit tie to a graduate Masters Degree. For surgery residents and applicants with an interest in employment within the medical device sector this Certificate provides a short program of innovation training with an emphasis on the process of team-based surgical device innovation.

The Certificate is open to health care and research professionals, surgical and medical residents, pharmacists, nurses, and those with a GPA in undergraduate degree of 3.0 or higher in the medical and allied sciences, or two or more years experience in the medical sector. The credits gained in this program may not automatically be transferred to another program prior to or after completion. Exceptions may apply in the case of a transfer prior to completion only in the case of extraordinary performance e.g, GPA 3.5 or higher in all courses and is at the discretion of the Graduate Studies Director. The Department of Surgery has not revised, reviewed or retired any programs as a result of this Graduate Certificate Proposal

APPENDIX B Guidelines for Developing a Research Portfolio

This document is intended to *help and guide* professors in the preparation of a research portfolio and those who evaluate such portfolios. The research portfolio is an essential component of applications for reappointment, tenure and promotion to full professor. These guidelines are *advisory*; following them is not compulsory. Indeed, research portfolios will vary by professor, within and across disciplines. The orientation and emphasis of a research portfolio will also reflect one's career stage. Notably, an emphasis on international research output, impact and recognition will be a particularly important dimension of a research portfolio that forms part of an application for promotion to full professor.

Some academic activities will have a hybrid quality and may be properly qualified as research and/or as teaching or service. Candidates can determine where to include information about such activities, providing justification where the same activity is discussed in more than one part of a reappointment, tenure or promotion dossier.

Further guidance might be found in the accompanying document *Examples of the Range of Research Accomplishments, Recognition and Impacts Valued at McGill.* This document provides illustrations of the broad spectrum of basic and applied research activities meriting recognition.

A. RESEARCH STATEMENT (5-7 pages)

A research portfolio should include a statement about the professor's scholarship that addresses:

- 1) The professor's *research program*
- 2) The professor's *research accomplishments, recognition and impact*

The statement should provide a narrative about the professor's scholarship that summarizes and contextualizes their research trajectory, creations and contributions. The statement should complement or elaborate on (rather than repeat) information otherwise available in the *curriculum vitae*.

1) Research Program

a) Themes or Axes of Research

This section presents a narrative of the professor's research to-date. It may:

- Describe the professor's key lines of research inquiry.
- Explain why these lines of research inquiry were pursued (in other words, describe why the professor viewed this research as meaningful and valuable, and what the professor aimed or aims to achieve and contribute in pursuing this research).
- Explain *how* these lines of research inquiry were pursued (methodological and theoretical frameworks), especially if novel methodological approaches are being developed.

b) Audiences and Interlocutors

This section discusses the groups that the professor envisages as the audiences and interlocutors who engage with, contribute to and benefit from the professor's research. Such groups may exist both within and beyond the academy and may include: professional bodies, industry, the artistic community, civil society or public actors), at the provincial, national and/or international levels.

Examples of ways in which a scholar reaches and engages with their target audience and interlocutors may include: journals targeted for publication; conferences attended; public performances and engagements; knowledge sharing and mobilization with constituencies outside of the academy.

c) Looking Ahead

Beyond discussing what a professor has accomplished to-date, a research statement should also articulate the professor's research goals for the coming period (five years is usually a foreseeable period for research planning). This part of the discussion may:

- Communicate future research goals in broad terms (e.g., intended research themes/lines of inquiry).
- Explain the link between future plans and past accomplishments or discoveries, remaining mindful that future research may legitimately move in new directions that differ from one's past scholarship.

2) Research Accomplishments, Recognition and Impact

a) Research Accomplishments

This section should include a statement of the professor's overall research productivity that sets out:

- The professor's most significant research accomplishments, creations or impacts, selecting those that best reflect the professor's research achievements and stature in their field. Each research accomplishment should be accompanied by a brief description explaining its significance. *Examples* of accomplishments or creations that can result from research activity include: a particular publication/group of publications; research prizes or awards; a research discovery or invention; an artistic production or performance; industry grants and contracts; the acquisition of professional credentials; research that has yielded notable patents; or innovations implemented in clinical or professional practice, policy; commercial activity or social ventures.
- A summary of the professor's overall record of productivity, including, for example:
 - o publications, signalling the nature of the contribution to coauthored publications;
 - o research funding record as a principal investigator, co-investigator or collaborator, signalling the purpose of the grant (research, operations, infrastructure) and the nature of the contribution or role within the funded research project;
 - o patents sought and awarded.

Insofar as publications and funding are concerned, the emphasis will be on peer-reviewed scholarship and funding applications. Professors may also include information about *efforts* deployed to secure external, peer-reviewed funding (e.g., funding applications that were unsuccessful; participation in workshops designed to support successful grant applications).

It will further be helpful for a researcher to include information about the norms and standards of their discipline in regard to expectations about collaborative research publications and funding.

• Any research <u>efforts</u> that exemplify innovative, new directions in scholarship or methodologies, such as those involving extensive interdisciplinarity or that may have required extensive "start-up" resources to acquire data prior to publication and research dissemination.

This section may also speak to the professor's commitment to open science and research accessibility through efforts to render scholarly information (e.g., research data and findings, software code, experimental methods) publicly available and transparent.

b) Research Recognition within and beyond the Scholarly Community

This section will describe how the professor's scholarship is recognized at the local, provincial, national and international levels. As noted above, in most cases, international recognition should be emphasized in research portfolios submitted as part of applications for promotion to full professor. A professor's narrative may refer to the following as examples of forms of research recognition:

- Invitations to contribute to edited collections
- Invitations to participate in scholarly conferences and workshops, noting keynote invitations
- Invitations to spend time at a peer institution as a visiting professor
- Invitations to serve as a peer-reviewer for journals or granting agencies, including *ad hoc* reviewing of journal articles, funding applications or scholarly awards
- Participation in research networks, consortia or research teams, identifying the professor's role within and contribution to these research groups
- Invitation to serve as an expert or specialist by public, private or international organizations
- Invited seminars and workshops
- Consultancies for industry, government and non-governmental organizations
- Reviews of the professor's work in scholarly journals or in the press/media
- Prizes and awards
- Election or appointment as a member or leader of a scholarly society

c) Research Impact

A professor's description of their research impact documents the influence that their scholarship has wielded, as identified by objective markers. To this end, one may draw on a range of indicators that demonstrate the esteem in which the professor's research is held in their field. Such indicators may include:

- The scope and range of scholarship that draws on and benefits from the professor's research. For professors in artistic disciplines, this may translate into identifying instances of "reprises", that is, a remounting or re-performance of one's own works by other scholars or artists.
- The professor's citation record. Despite critiques of the potential shortcomings of citation indices as measures of research impact, these remain important metrics within particular disciplines.
- Impacts of the professor's research on teaching and training students and trainees (e.g., publications used as teaching materials or as central to graduate projects).
- Evidence of adoption of varied teaching strategies inspired by a professor's research on pedagogical approaches within their discipline.
- Effects of the professor's research outside of the academy, for example, in clinical practice, industry, government or civil society sectors, including notable technological or policy innovations, commercial activity or social ventures.
- Knowledge translation, mobilization and community engagement activities involving the professor's research, which may include public and community collaborations, workshops or symposia.

B. APPENDICES (no page limit)

Appendices should support and be germane to the Research Statement. They should be clearly labeled and organized. They may include:

- 1) A list of publications in standard citation style (may be omitted if this list is part of the submitted CV).
- 2) Copies (electronic) of, or active hyperlinks to, publications.
- 3) Other materials that may be relevant (e.g., reviews of the professor's written or other work; artistic portfolios or recordings; a summary of innovation and entrepreneurial activity, including patent applications, patents, commercial or social enterprises launched).

Examples of the Range of Research Accomplishments, Recognition and Impacts Valued at McGill

This document reflects the diversity of research accomplishments, recognitions and impacts valued within our University community. It is expected to serve as a living document that will expand over time to reflect evolutions and innovations in academic research. Examples enumerated here are intended to be illustrative, providing guidance to those preparing and evaluating research portfolios. These examples do not constitute an exhaustive or definitive list of recognized and valued research activities and outcomes. Moreover, no example cited here will, by itself, necessarily be determinative of a reappointment, tenure or promotion application.

Publications

- Over a series of three publications in leading journals, I advanced a feminist theory of contractual negotiation that has had substantial impact on the field, as evidenced by the [XXX] citations these publications have garnered in just [YY] years.
- In what has become a text now widely used in the curricula of PhD programs in my field, I challenged prevailing orthodoxy as regards the role of artists in social movements, drawing on an in-depth case study of HIV/AIDS activism. The book is well cited, with [XXX] citations since [YYYY].
- My research on ecosystem services has resulted in multiple articles published in *Nature* and was incorporated into several chapters in the [YYYY] Millennium Ecosystem Assessment.
- The open-source software developed by my group to implement and compare reinforcement learning algorithms is available on GitHub and has a base of more than [XXX] users and [YYY developers] who are now contributing to it.
- My book is the leading ethnographic study demonstrating the rich and complex social, economic and political systems of the [XXXX] nation in the pre-contact period.
- On the strength of my publications on the specific regulation of domestic work, I was named the International Labour Organization's lead on international standard setting on decent work for domestic workers.
- My publications on innovative, problem-based teaching and learning in electrical engineering have spurred the reform of undergraduate Engineering curricula across various universities. I have guided professors at institutions such as [XXXX] as they have adopted problem-based pedagogical approaches in their courses.

Research prizes or awards

- One of my publications received the "Best Paper of [YYYY]" award from the leading journal in which it was published.
- In [YYYY], I was awarded a prestigious Killam Prize by the Canada Council for the Arts.
- In [YYYY], I was awarded the prestigious Rutherford Memorial Medal in Physics by the Royal Society of Canada.
- In [YYYY], I received the Pathfinder Award from the Canadian Association of Black Lawyers.
- In [YYYY], I was awarded the NSERC Synergy Award for Innovation resulting from a partnership with [ABC Co] a collaborative arrangement that yielded commercial benefits in addition to ground-breaking research that formed the basis of several publications in leading journals.

• In [YYYY], I was awarded the prestigious [XXX] Fellow recognition by the International Society of [...], the main scholarly society in my field of research.

A research discovery or invention

• My laboratory is credited with the development of a novel method for studying genomic DNA methylation in wild organisms — a technique that opens new research frontiers at the intersection of ecology and epigenetics. Our method has been the focus of a series of publications in leading journals in my field, and has been widely adopted by other research teams.

An artistic production or performance

• With funding form a collection of industry partners in the arts, my institute, together with a theatre group, the Schulich School of Music and Opera McGill, conducted a yearlong performance, research and teaching project with a focus on Shakespeare.

Industry grants and contracts

- In tandem with McGill's commercialization team and based on a patented technology, I applied to Phase I of NSERC's Idea to Innovation (NSERC I2I) Program together with an industrial partner and was awarded a grant that allowed me to further develop a new technology. We were successful enough to move to Phase II of the same program, which resulted in cash contributions from the industrial partner to prepare the invention for market.
- I received funding from various NSERC technology partnership programs, including Collaborative Research Development (CRD) and strategic grants. This funding allowed me to prototype materials and processes related to an invention in photonics. This step provided industry validation for the technology, leading to the creation of a spin-off company and a partnership with a Montreal photonics firm.
- I received NSERC Strategic Grant funding for research into new materials to make optical devices for telecommunications through collaboration with a Laval University spin-off.
- My institute received a SSHRC grant, which we are using to design and develop adaptive musical instruments for children with disabilities. These instruments are being integrated into pedagogic, therapeutic and recreational contexts via a partnership with a specialized school in Montreal.
- My lab was awarded a significant grant from the Bill and Melinda Gates Foundation and Merck
 Canada to work together with researchers at the University of Toronto to discover new and
 improved drug treatments for tuberculosis, malaria and neglected tropical diseases.

Research that has yielded

Patents, copyrighted material, software

- My research led to the development of software that reconciles medication for admitted hospital
 patients. The system is presently running in several hospital units and data collected from the
 pilot rollout indicates a significant reduction in confusion and delays related to patient
 medication.
- My discoveries related to photonics technologies are now protected by a US patent.

- I have several patents pending to protect technologies associated with a "green" technology production and use of forest products materials for personal care and print products.
- Research conducted at my companies by McGill graduates has generated numerous technology patents.

Policy innovations implemented in practice

- My research into the legal implications of genetic inventions led me to act as the lead expert in drafting new OECD Guidelines on the licensing of genetic inventions.
- My expertise in nanocrystalline structures allowed me to draft a component of a policy document which is now part of a standard protocol to assess properties of nanocrystalline cellulose.
- Because my research focuses on the intersection between intellectual property policy and the life sciences, I was invited to act as the lead expert in an OECD publication on collaborative mechanisms for using intellectual property in the life sciences.
- Because of my research and expertise on the topic of intellectual property, I was invited to participate on an expert panel established by NSERC to revise its intellectual property policy.
- My qualitative research on the lending practices of private, high-risk lenders to credit-poor borrowers prompted more protectionist oversight policies, which have been adopted in provincial legislation in Quebec and several other provinces.

Commercial activity

- I developed the basis for a new drug to treat cystic fibrosis which has been patented and subsequently licensed to a spin-off company. I am the chief scientific officer for the company and I collaborated on the scientific analysis that was completed in parallel with a clinical trial to elucidate the drug's mechanism of action.
- I developed and patented advanced sensors for real time analysis, improving the way people perform measurements. My team entered McGill's Dobson Cup competition with my invention and we won \$10,000. Using these funds, we incorporated a company which licensed the patents from McGill. The company entered into an exclusive distribution agreement and we shipped our first order a year ago. The company is now developing a flow system together with an international distributor based in Europe. One of the company's industrial partners received a substantial governmental grant (NSERC I2I) to further develop our technology and we are currently applying to the Industrial Research Assistance Program (IRAP).
- I am working with pharmaceutical companies to develop a novel antibody-conjugated drug for the treatment of different cancers and to identify a gene signature corresponding to the breast cancer endothelium.

Social ventures

- I developed an app that together with a low-cost over the counter self-test can detect HIV without the need for a doctor's visit.
- I launched a pro bono legal consultancy for start-ups and social ventures in Montreal.

Consultancies

For industry

- As an expert in my field, I have participated in numerous industry round-table discussions to help define the future directions and evolution of cancer treatment.
- I consult widely for industry in telecommunications and sustainable technologies.
- I have been appointed to chair, or participate in, the technology advisory boards of a McGill University spin-off and a Bishops University spin-off.
- I consulted pro bono with lawyers arguing patent cases at the Supreme Court of Canada.

For government

- I led several teams drafting reports for Industry Canada, Environment Canada, Justice Canada, and Health Canada on technology transfer, gene patents and intellectual property policy.
- My expertise has led me to be invited to chair or participate in, several NSERC technology or industry partnerships programs, including I2I, and the US department of Energy.
- Given my research in migration and human rights law, I was called to give expert testimony before a Parliamentary committee deliberating proposed legislative amendments that would redefine Canada's temporary foreign worker program.
- Given my research theorizing issues of governance and multiculturalism, I was a member of a team commissioned to redesign the province's primary school curriculum on ethics, culture and religion.

For non-governmental organizations

• I am chair of a prominent national research network's Knowledge and Technology Exploitation Committee.

Impacts including notable technological, clinical or policy innovations, commercial activity or social ventures

In industry

- I patented and licensed from McGill a technology that led to the first realization of the optical chip volume manufacturing paradigm for telecommunications.
- I developed an adaptive learning music recommendation system that automatically suggests songs to listeners based on past preferences, song descriptions, and personal demographic information. The technology was patented and licensed to a company that specializes in Internet applications and music recommendation tools. The technology has been incorporated into the company's flagship product, and is now the engine for a commercial product launched by one of Canada's largest media companies.
- I led development of the world's first all-plastic, LED color liquid crystal display technology based on a McGill transistor patent; the achievement was recognized by two international awards.
- I obtained a US patent to protect my discoveries related to methods of making and using skinderived stem cells. This technology was licensed to a Canadian therapeutics company which is funding further research in the area of treating neurological disorders.

- I have spun out two companies from McGill which have yielded equity-based returns and/or returns based on licensing revenues.
- I am the founder and vice-president of scientific affairs for a Montréal and New York -based contract research organization that provides sophisticated preclinical drug development capabilities to commercial and academic customers.
- My research on tele-medicine has influenced and measurably enhanced the quality of delivery of health services to the Canadian North.

In government

 Because of my expertise on the precautionary principle, I was appointed to an advisory committee to Health Canada and Environment Canada. Over a period of four years, our deliberations and advice influenced key decisions in implementing the Canadian Environmental Protection Act.

In civil society sectors

- I developed a questionnaire, now used widely by medical practitioners, that allows individuals to give their doctors a clear understanding of the quality and intensity of pain that they are experiencing.
- I patented and licensed a novel technology for treating amblyopia (lazy eye syndrome) to a spinoff company. The company entered into a collaboration with Paris-based gaming company to develop the world's first therapeutic videogame.

Research funding

In addition to funding awarded pursuant to peer-reviewed competitions from public funding agencies (e.g., FRQ, SSHRC, CIHR, NSERC), the following are examples of recognized and valued research funding.

From industry contracts

- I received an NSERC Collaborative Research and Development grant to develop, together with a Canadian company, a new laser-based light source for use in projectors, leveraging previous research I have done in this area.
- Through the former MDEIE program, one of my companies was awarded a contract from the former *Institut des communications graphiques du Québec* to validate a manufacturing protocol.
- A company made contact with my lab in order to get help with a problem they were facing. We
 developed a solution to meet their immediate need and also generated a promising new
 technology. Now, the industry partner is supporting the development of this technology through
 sponsored research and my team is leveraging NSERC's Collaborative Research and Development
 program.
- I received an NSERC Collaborative Research and Development grant and a Technology Partnership Grant to develop, together with a Canadian company, a new optical chip technology for telecommunications.
- I received an NSERC Collaborative Research and Development grant to develop, together with a Canadian company, a new technology for avionics.

** <u>Note</u> that some industry contracts will be bound by confidentiality agreements limiting disclosure of details about associated research. In such cases, the researcher should seek guidance from their Associate Dean (Research) about presenting information about the research impact and contributions to the scientific field, without explaining details (e.g., through letters from the industry partner).

From other non-traditional sources (e.g. angel or venture funding for a start-up)

- A Montreal-based life sciences venture capital fund financed a neuro-inflammation research project I developed based on an anti-inflammation family of enzymes identified by my research team that may play a role in multiple sclerosis.
- My team receives \$1.4 million per year in funding from a US-based venture capital firm to carry out research that guides optimal clinical development strategies for novel portfolio drug candidates in oncology.
- I received funding from the Climate Change and Emissions Management Corporation (CCEMC) Grand Challenge for two projects designed to use carbon dioxide in industrial processes. One Project involves using carbon dioxide in concrete production. The other project uses solar power to transform carbon dioxide and water into hydrocarbon fuels.
- I received funding from the International Fund for Agricultural Development to support capacity-building for women's organizations involved in food conservation and food security in Africa.
- I received funding from the Bill and Melinda Gates Foundation to develop a vaccine against malaria in Cameroon.
- I received funding from World Vision to support knowledge translation in the area of mental health following a natural disaster in Peru.