510th REPORT OF THE ACADEMIC POLICY COMMITTEE TO SENATE – PART B
on the APC meeting held on March 17th, 2022

I.   TO BE APPROVED BY SENATE

(A) NEW TEACHING PROGRAMS REQUIRING SENATE APPROVAL
GRADUATE AND POSTDOCTORAL STUDIES
Faculty of Medicine and Health Science
Graduate Certificate in Biomedical Science Translational Research (15 cr.) – *appendix a*
At a meeting of March 17th, 2022, APC reviewed and approved a proposal to create a new Graduate Certificate in Biomedical Science Translational Research (15 cr.). The new program is an introduction to relevant clinical aspects of translating scientific discovery as a means of bridging the gap between research and application in clinical settings. Its aim is to train the next generation of translational scientists and to promote future collaboration among scientists, clinicians and clinician-scientists with a combination of coursework and clinical mentorship.

> *Be it resolved that Senate approve the creation of the proposed Graduate Certificate in Biomedical Science Translational Research (15 cr.)*

GRADUATE AND POSTDOCTORAL STUDIES
Interfaculty Studies
Graduate Certificate in Foundations in Health Sciences Education (15 cr.) – *appendix b*
At a meeting of March 17th, 2022, APC reviewed and approved a proposal to create a new Graduate Certificate in Foundations in Health Sciences Education (15 cr.). The new funded program focuses on theoretical and evidence-based knowledge and practical skills in the areas of teaching and learning, curriculum and course design, assessment and evaluation, leadership and scholarship as applied to health sciences education. Program content includes contemporary educational and psychological concepts, theories and evidence-based practices relevant to specific contexts in which health and health science professionals practice and the different educational roles they are likely to assume. The blended learning format includes face-to-face instruction, synchronous and asynchronous online learning that will address the gap in existing health professions education. MES approval will be required as it is a self-funded program.

> *Be it resolved that Senate approve the creation of the proposed Graduate Certificate in Foundations in Health Sciences Education (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 – *none*

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**

I. **ACADEMIC UNIT REVIEWS -** *none*

II. **APPROVAL OF COURSES AND TEACHING PROGRAMS**

1. Programs

a) APC Approvals (new options/concentrations and major revisions to existing programs)

i. New Programs

ii. Major Revisions of Existing Programs
Approved by SCTP on January 27th, 2022 and reported to APC on March 17th, 2022

Faculty of Science
B.Sc.; Major in Physiology (65-66 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 January 27th, 2022 and reported to APC on March 17th, 2022

Faculty of Agricultural and Environmental Sciences
B.Sc. (Nutr.Sc.); Major in Dietetics (115 cr.)
B.Sc. (Nutr.Sc.); Major in Nutrition; Global Nutrition (90 cr.)
B.Sc. (Nutr.Sc.); Major in Nutrition; Metabolism, Health and Disease (90 cr.)
B.Sc. (Nutr.Sc.); Major in Nutrition; Sports Nutrition (90 cr.)
B.Sc. (Nutr.Sc.); Major in Nutrition; Food Function and Safety (90 cr.)

Faculty of Engineering
B.Eng. in Computer Engineering (133-136 cr.)
B.Eng.; Co-op in Software Engineering (141-144 cr.)
B.Eng. in Electrical Engineering (134-137 cr.)
B.Eng.; Honours in Electrical Engineering (138-141 cr.)
B.Eng.; Minor in Software Engineering (18 cr.)

Desautels Faculty of Management
M.M. in International Master's in Health Leadership; Non-Thesis (45 cr.)

Faculty of Science
B.Sc.; Honours in Atmospheric Science (72-74 cr.) [from January 6, 2022]

Approved by SCTP on February 17th, 2022 and reported to APC on March 17th, 2022

School of Continuing Studies
Professional Development Certificate in Executive Production and Creative Industries (28 CEUs)

Faculty of Engineering and Desautels Faculty of Management
M.M. in Manufacturing Management; Non-Thesis (56 cr.)

Graduate and Postdoctoral Studies
Faculty of Agricultural and Environmental Sciences

M.Sc. (A.) in Human Nutrition; Non-Thesis – Dietetics Credentialing (83 cr.)

Schulich School of Music

M.A. in Music; Musicology – Gender and Women's Studies (45 cr.)
M.A. in Music; Musicology (45 cr.)

Faculty of Science
B.A. & Sc.; Honours in Cognitive Science (60 cr.)
B.A. & Sc.; Interfaculty Program in Cognitive Science (54 cr.)
B.A. & Sc.; Minor in Cognitive Science (24 cr.)

ii. Program Retirements
Approved by SCTP on January 27th, 2022 and reported to APC on March 17th, 2022

Faculty of Agricultural and Environmental Sciences
B.Sc. (Nutr.Sc.); Major in Nutrition; Health and Disease (90 cr.).

Approved by SCTP on February 17th, 2022 and reported to APC on March 17th, 2022
School of Continuing Studies
Certificate in Accounting (30 cr.).

Graduate and Postdoctoral Studies
Faculty of Agricultural and Environmental Sciences
M.Sc. in Renewable Resources; Non-Thesis – Environmental Assessment (45 cr.).
Faculty of Science
Ph.D. in Psychology; Psychosocial Oncology (0 cr.).

2. **Courses**

   a) **New Courses**
      Reported as having been approved by SCTP on January 27th, 2022:7
      Faculty of Agricultural and Environmental Sciences: 4
      Faculty of Engineering: 1
      Faculty of Medicine and Health Sciences: 2

      Reported as having been approved by SCTP on February 17th, 2022:14
      Faculty of Agricultural and Environmental Sciences: 1
      Faculty of Arts: 7
      Faculty of Education: 3
      Faculty of Medicine and Health Sciences: 2

Faculty of Science: 1

b) Course Revisions
Reported as having been approved by SCTP on January 27th, 2022: 19
Faculty of Agricultural and Environmental Sciences: 6
Faculty of Engineering: 7
Desautels Faculty of Management: 6

Reported as having been approved by SCTP on February 17th, 2022:80
Faculty of Agricultural and Environmental Sciences: 38
Faculty of Arts: 36
School of Continuing Education: 1
Faculty of Science: 5

c) Course Retirements - *none*
Reported as having been approved by SCTP on January 27th, 2022: 1
Faculty of Dental Medicine and Oral Health Sciences: 1

Reported as having been approved by SCTP on February 17th, 2022:26
Faculty of Agricultural and Environmental Sciences: 4
School of Continuing Education: 22

III. OTHER
Council of Graduate and Postdoctoral Studies (CGPS)
Revisions to the Graduate Student Research Progress Tracking Regulation

At a meeting of March 17th, 2022, APC was informed that clarifications were made to the wording of the Graduate Student Research Tracking Regulation and changes also acknowledge the use of myProgress in progress tracking.

McGill

New Program/Concentration Proposal Form

(2019)

1.0 Degree Title	2.0 Administering Faculty or GPS
Please specify the two degrees for concurrent degree programs	
Graduate Certificate (Gr. Cert.)	Graduate and Postdoctoral Studies

1.1 Major (Subject/Discipline) (30-char. max.)

Biomedical Science Translational Research

Offering Faculty & Department

Fac. of Medicine & Health Sciences – Pharmacology & Therapeutics

1.2 Concentration (Option) (30 char. max.)

3.0 Effective Term of Implementation
(Ex. Sept. 2019 or 201909)
Term

202209

1.3 Complete Program Title (info from boxes 1.0+1.1+1.2+5.2)

Graduate Certificate in Biomedical Science Translational Research

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4.0 Rationale and Admission Requirements for New Program/Concentration

Graduate students interested in the translation of biomedical research into clinical application need to understand how basic research is relevant to the clinical context and to identify gaps (knowledge/technological) that currently exist in the clinic and use it to inform further research. We combine coursework and clinical mentorship in an effort to train the next generation of translational scientists.

Admission Requirement: must hold an undergraduate degree in a biomedical science or allied discipline with a minimum CGPA of 3.0 out of 4.0 or a CGPA of 3.2 out of 4.0 for the last two years of full-time study in the last two years of academic studies.

5.0 Program Information
Indicate an "x" as appropriate

5.1 **Program Type**	5.2 **Category**	5.3 **Level**
Bachelor's Program	Faculty Program (FP)	Undergraduate
Master's	Major	Dentistry/Law/Medicine
M.Sc.(Applied) Program	Joint Major	Continuing Studies (Non-Credit)
Dual Degree/Concurrent Program	Major Concentration (CON)	Collegial
Certificate	Minor	**X** Masters & Grad Dips & Certs
Diploma	Minor Concentration (CON)	Doctorate
X Graduate Certificate	Honours (HON)	Post-Graduate Medicine/Dentistry
Graduate Diploma	Joint Honours Component (HC)	Graduate Qualifying
Professional Development Cert	Internship/Co-op	
Ph.D. Program	Thesis (T)	**5.4 Requires Centrally-Funded**
Doctorate Program	Non-Thesis (N)	**Resources**
(Other than Ph.D.)	Other	Yes _X_ No _
Self-Funded/Private Program	Please specify	
Off-Campus Program		
Distance Education Program		
Other (Please specify)		

6.0 Total Credits or CEUs (if latter, indicate "CEUs" in box)	7.0 Consultation with
15	Related Units **X** Yes No
	Financial Consult **X** Yes No
	Attach list of consultations.

8.0 Program Description (Maximum 150 words)

The Graduate Certificate in Biomedical Science Translational Research is an introduction to relevant clinical aspects of translating scientific discovery as a means of bridging the gap between research and application in clinical settings, while promoting future collaboration among scientists, clinicians and clinician-scientists while promoting future collaboration. The program includes clinical mentorship.

9.0 List of proposed new Program/Concentration

If new concentration (option) of existing program, a program layout (list of all courses) of existing program **must** be attached.

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 Biomedical Science Translational Research

Required Courses (12 credits)

FMED 525 Foundations of Translational Science (3 credits)
PHAR 522D1/D2 Fundamentals of Disease Therapy (6 credits)
PHAR 524 Clinical Mentorship (3 credits)

Complementary Courses (3 credits)

3 credits from the following:

BMDE 655 Biomedical Clinical Trials - Medical Devices (3 credits)
EPIB 507 Biostats for Health Sciences (3 credits)

EXMD 617 Workshop in Clinical Trials 1 (1 credit)
EXMD 618 Workshop in Clinical Trials 2 (1 credit)
EXMD 619 Workshop in Clinical Trials 3 (1 credit)

EXMD 620 Clinical Trials and Research 1 (1 credit)
EXMD 633 Clinical Aspects of Research in Respiratory Diseases (3 credits)
EXMD 640 Experimental Medicine Topic 1 (3 credits)
PHAR 508 Drug Discovery and Development 3 (3 credits)
PPHS 529 Global Environmental Health and Burden of Disease (3 credits)

Attach extra page(s) as needed

10.0 Approvals			
Routing Sequence	Name	Signature	Meeting Date
Department	Gerhard Multhaup	*Gerhard Multhaup*	February 17th, 2021
Curric/Acad Committee	Melissa Vollrath- FCC Chair	M Vollrath	10th November 2021
Faculty 1	Aimee Ryan- FMHS Assoc. Dean	A-R	17th November , 2021
Faculty 2			
Faculty 3			
CGPS		CGPS APPROVAL	December 13, 2021
SCTP	Cindy Smith, SCTP Secretary		January 27, 2022
APC		APC APPROVAL	March 17, 2022
Senate			

Submitted by

		To be completed by ES:
Name	Terence Hébert	
Phone	514-398-1398	CIP Code
Email	Terence.hebert@mcgill.ca	
Submission Date		

REMINDERS:
*Box 5.4 – Must be completed; see section 6.5.4 within the New Program Guidelines at:
https://www.mcgill.ca/sctp/guidelines.
**All new program proposals must be accompanied by a 2-3 page support document.

<u>Rationale for a Graduate Certificate in Biomedical Science Translational Research</u>

While biomedical research advances at an ever increasing pace, effectively translating these findings into tangible human health improvements remains a challenge. An overarching concern is **that we do not train science graduate students to be skilled at translating their research** nor provide the infrastructure required to facilitate interdisciplinary communication, particularly between clinicians, clinician-scientists and scientists. There is an educational gap[1] that we seek to fill. Historically, we have relied on MD/PhD programs to fill this gap. However, given how time-intensive and selective these programs are, in addition to the high resource-cost of this sort of combined training, this strategy alone will not meet this growing curricular and societal needs[2]. Thus, **a radical re-thinking of how we train the next generation of translational scientists produced in biomedical science graduate programs is imperative** if we are to break down professional silos and facilitate the flow of innovation from bench to bedside. *Our graduates will fill a need in the knowledge economy as well, as they will be better placed to help translate discoveries into inventions, intellectual property and new clinical interventions.* The U.S. has addressed this need as early as 2005 by funding training programs at the top 13 institutions in the U.S. under the Howard Hughes Medical Institute (HHMI) that would expose graduate students to medicine, and give them access to the language, culture and network of the clinical world. However, **Canada is sorely lagging behind in creating such holistic programs.** Specifically at McGill, students interested in translational research can take individual courses or attend workshops, but such offerings are sparse, department- or faculty-specific (see for example https://www.mcgill.ca/study/2021-2022/faculties/medicine/graduate/programs/graduate-certificate-gr-cert-translational-biomedical-engineering), and not widely available to graduate student students in biomedical science departments in the Faculty of Medicine and Health Sciences. Further, none offer structured clinical mentorship to our knowledge.

We propose a 1.5 year graduate certificate program in translational research open to all qualified graduate students that can be completed before, concurrently (if allowed) or after their graduate degree programs. Modelled loosely after the HHMI-funded Leder Human Biology Program at Harvard University, it will combine medical-style coursework and clinical mentorship, and leverage network-building opportunities. In a preliminary survey conducted in April 2020 among 72 McGill students, **74% of participants were eager to enrol in the proposed program, while the other 26% would enrol pending details such as financing and integration with their degree programs.** The students we want to attract are those either immediately before or after their project-based graduate training. **It will be extremely interesting for students transitioning from graduate to medical training as well.** Ideally, as the program evolves, we hope to build it into a larger MSc or PhD program within the School of Biomedical Sciences.

<u>Benchmarking of Existing Programs</u>

To assess the unmet curricular need of our proposed program, we conducted an analysis of existing translational medicine programs from over 50 universities across the United States and Canada. As summarized in the table below, our findings illustrate three main categories of programs: either course-based, research-based, or a more holistic combination of course- and research-based (see **Appendix** for a curated list of relevant programs).

In Canada, the most common form of program was a Master's degree that offered 1-2 years of coursework in translational science and medicine, ranging from pathology and physiology to clinical trial design. Furthermore, many programs were geared towards medical doctors, early-career principal investigators and post-doctoral researchers. In contrast, **few universities provide certificate programs designed for graduate students that could be completed alongside their doctoral studies.** Our search revealed a fundamental need in Canada for holistic programs that combine standard coursework, hands-on experience in clinical settings and opportunities to establish a network of contacts in both academic and clinical communities. We believe that as one of the leading universities in Canada, McGill University is uniquely positioned to pioneer such a program.

Table 1 - *Types of Translational Medicine Programs*

Category	Example Institutions	Characteristics
Course-based	University of Alberta	Two years of coursework on various topics including preclinical research, clinical trials & drug discovery.
Research-based	University of California - Berkeley	Curriculum focuses on the completion of an independent capstone project related to themes of translational medicine.
Holistic approach	Harvard University	Mix of traditional coursework complemented by structured clinical mentorship and exposure to practical settings of clinical care.

Structure of Proposed Program

The Graduate Certificate in Biomedical Science Translational Research we envision will span 1.5 years and enrich basic science training through a mix of medical-style coursework crafted for graduate students, an immersive clinical experience and engagement with the broader translational network at McGill. It will initially be run out of the Department of Pharmacology and Therapeutics. The coursework will start in the winter semester with an existing course at McGill: *Foundations of Translational Science* (FMED 525). In the following year, students enroll in a new year-long *Fundamentals of Disease Therapy* course, PHAR 522, in which clinicians are invited to teach 3 week modules covering one organ system-normal function, associated diseases, and state-of-the-art treatment approaches. Concurrently, students will be paired with a clinical mentor in our other new course- PHAR 524 *Clinical Mentorship* designed for graduate students. They will also take an additional complementary course (from a wide array of initial offerings after our consultations with the relevant course coordinators), take part in student-led discussion groups where they process their experiences with their peers. Moreover, we will organize recurring seminars and other networking events with clinical mentors, industry partners and MD & MD-PhD students which are essential to not only the success of this program but also fostering a strong, long-lasting interdisciplinary community.

Incentives for Stakeholders

Students ❏ Gain experiential clinical knowledge to better inform graduate and professional training and future research aspirations	Principal Investigators/Professors ❏ Foster collaboration with clinicians, create potential for new ideas, grants, and research projects
❏ Engage real individuals suffering from the relevant disease that will inspire/motivate research ❏ Creation of a lifelong bench-to-bedside network for more effective innovation and knowledge transfer	❏ Increase student mentorship and training for graduate students ❏ Harness clinician input to conduct more clinically-oriented and impactful research
Clinicians ❏ Keep up to date with cutting-edge research in their field to inform clinical practice ❏ Affect the direction of current and future research to better address clinical need ❏ Develop long-term collaborations with individual researchers	McGill University ❏ Become a world leader for the development of translational scientists ❏ Foster student passion for translational work with institutional support ❏ Build infrastructure to foster collaboration between McGill researchers/students and McGill clinicians

References
1. Heller, C. & De Melo-Martín, I. Clinical and translational science awards: Can they increase the efficiency and speed of clinical and translational research? *Acad. Med.* **84**, 424–432 (2009).
2. Smith, C. L., Jarrett, M. & Bierer, S. B. Integrating clinical medicine into biomedical graduate education to promote translational research: Strategies from two new phd programs. *Acad. Med.* **88**, 137–143 (2013).

Appendix: Relevant Programs from Benchmarking Review of Existing Programs

Institution	Program/Class Name	Program Type	Program Length	Website
American Universities				
Harvard University	Leder Human Biology & Translational Medicine	Graduate Certificate	1.5 years	https://lhbtm.squarespace.com/
Emory University	Georgia Clinical & Translational Science Alliance (Georgia CTSA) Certificate Program in Translational Research (CPTR) Affiliated with Emory University	Graduate Certificate	1 year, maximum complete in 2 yrs	http://georgiactsa.org/training/certificate-program-i n-translational-research/index.html
University of Michigan - Ann Arbor	Translational Research Education Certificate (TREC)	Graduate Certificate	9 credits; length not mentioned	https://michr.umich.edu/rdc/2015/9/17/translational -research-education-certificate
University of Minnesota - Twin Cities	TL1 Program	Career development training program for trainees	Up to 2 years	https://www.ctsi.umn.edu/career-development-programs/education-and-training/tl1-program
University of North Carolina - Chapel Hill	Graduate Training Program in Translational Medicine	Graduate Certificate	Concurrent with PhD	https://www.med.unc.edu/oge/stad/transmed/
University of Texas - Austin	Certificate in Translational Science	Graduate Certificate	1 year	https://iims.uthscsa.edu/ed_certificate_in_ts.html
			2 years	https://www.med.upenn.ed

University of Pennsylvania	Graduate Training in Medical Science	Graduate Certificate		u/gtms/
Columbia University	1 year course (6 modules)	Certificate during PhD	1 year	https://www.gsas.cuimc.columbia.edu/med-grad-program
University of California - San Diego (UCSD)	Translational Science Certificate	Certificate	1 year	https://extension.ucsd.edu/courses-and-programs/translational-science
Yale University	Medical Research Scholars Program	Certificate during PhD	3 years	https://medicine.yale.edu/bbs/training/nihprograms/mrsp/
Canadian Universities				
Queen's University	Translational Medicine	MSc./PhD	2-year thesis-based program	https://www.queensu.ca/sgs/programs-degrees/translational-medicine https://deptmed.queensu.ca/academics/translational-medicine-graduate-programs
University of Alberta	Translational Research Training Program	Graduate Program	2 years	https://www.ualberta.ca/department-of-medicine/education/graduate-studies/translational-medicine-program/index.html
University of Toronto	Translation Research Program	Masters of Health Science	2 years (5 terms)	https://trp.utoronto.ca/our-program/

New Program/Concentration Proposal Form

McGill

(2019)

1.0 Degree Title
Please specify the two degrees for concurrent degree programs

> Graduate Certificate

1.1 Major (Subject/Discipline) (30-char. max.)

> Foundations in Health Sciences Education

1.2 Concentration (Option) (30 char. max.)

>

1.3 Complete Program Title (info from boxes 1.0+1.1+1.2+5.2)

> Graduate Certificate in Foundations in Health Sciences Education

2.0 Administering Faculty or GPS

> Graduate and Postdoctoral Studies

Offering Faculty & Department

> Interfaculty Studies

3.0 Effective Term of Implementation
(Ex. Sept. 2019 or 201909)
Term

> 202209

4.0 Rationale and Admission Requirements for New Program/Concentration

> To address the gap in existing health professions education (HPE) programs offered globally, including McGill's M.A. in Educational Psychology, Health Professions Education concentration. These programs are sufficient in scope and content but do not adequately meet the needs of current and future students, including flexibility of curricula and delivery, contextualized & applied content, mentoring support, and sufficient interaction with experts in medical education. Students will primarily be practicing health professionals. The graduate certificate will facilitate their work as clinician educators. Admissions requirements: An undergraduate degree in health sciences or health professions (or related field) and an interview. See support document (attached) for further details.

5.0 Program Information
Indicate an "x" as appropriate

5.1 Program Type

Bachelor's Program
Master's
M.Sc.(Applied) Program
Dual Degree/Concurrent Program
Certificate
Diploma
X Graduate Certificate
Graduate Diploma
Professional Development Cert
Ph.D. Program
Doctorate Program
(Other than Ph.D.)
X   Self-Funded/Private Program
Off-Campus Program
Distance Education Program
X   Other (Please specify): ONLINE (BLENDED)

5.2 Category

Faculty Program (FP)
Major
Joint Major
Major Concentration (CON)
Minor
Minor Concentration (CON)
Honours (HON)
Joint Honours Component (HC)
Internship/Co-op
Thesis (T)
Non-Thesis (N)
Other
Please specify

>

5.3 Level

Undergraduate
Dentistry/Law/Medicine
Continuing Studies (Non-Credit)
Collegial
X Masters & Grad Dips & Certs
Doctorate
Post-Graduate Medicine/Dentistry
Graduate Qualifying

5.4 Requires Centrally-Funded Resources

Yes _X_   No ___

6.0 Total Credits or CEUs (if latter, indicate "CEUs" in box)

> 15

7.0 Consultation with

Related Units	X	Yes	No
Financial Consult	X	Yes	No

Attach list of consultations. Attached

8.0 Program Description (Maximum 150 words)

The Graduate Certificate in Foundations in Health Sciences Education focuses on theoretical and evidence-based knowledge and practical skills in the areas of teaching and learning, curriculum and course design, assessment and evaluation, leadership, and scholarship as applied to health sciences education. Program content includes contemporary educational and psychological concepts, theories, and evidence-based practices relevant to specific contexts in which health and health science professionals practice, and the different educational roles they are likely to assume. The blended learning format includes face-to-face instruction, and synchronous and asynchronous online learning. The program includes project-based assignments that build on one another, provide opportunities to integrate courses, and explore their application to authentic personal contexts.

9.0 List of proposed new Program/Concentration

If new concentration (option) of existing program, a program
layout (list of all courses) of existing program **must** be attached.

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 Foundations in Health Sciences Education (15 credits)

Required Courses (15 credits)
EDPE 657 Learning, Cognition, and Motivation in Health Sciences Educ (3 credits)
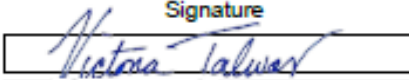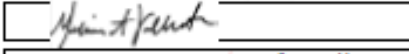EDPE 658 Introduction to HSE Curriculum and Program Development (3 credits)
EDPE 659 Introduction to Assessment and Evaluation in HSE (3 credits)
HSED 601 Introduction to Leadership in Health Sciences Education (3 credits)
HSED 602 Introduction to Scholarship in Health Sciences Education (3 credits)

Attach extra page(s) as needed

10.0 Approvals

Routing Sequence	Name	Signature	Meeting Date
Department	Victoria Talwar	*Victoria Talwar*	12/9/2021
Curric/Acad Committee	Melissa Vollrath- FCC Chair	*signature*	18 November, 2021
Faculty 1	Aimee Ryan- Assoc. Dean	Aimee Ryan (Digitally signed by Aimee Ryan Date: 2021.12.10 19:27:43 -05'00')	10 December, 2021
Faculty 2	see next page for Educ approval		
Faculty 3			
CGPS		CGPS approval	January 17, 2022
SCTP	Cindy Smith, SCTP Secretary		Feb.17, 2022
APC		APC APPROVAL	March 17, 2022
Senate			

Submitted by

		To be completed by ES:
Name		
Phone		CIP Code
Email		
Submission Date		

REMINDERS:
*Box 5.4 – Must be completed; see section 6.5.4 within the New Program Guidelines at:
https://www.mcgill.ca/sctp/guidelines.
**All new program proposals must be accompanied by a 2-3 page support document.

Vanessa Bridgman, Ms.

From:	Adam Dubé, Dr.
Sent:	January 4, 2022 3:24 PM
To:	Vanessa Bridgman, Ms.
Subject:	Re: Feedback on proposals submitted for CGPS- January 17th

Vanessa,

I approve the new Graduate Certificate Foundations in Health Science Education.

Adam Dubé, PhD | Associate Professor | Associate Dean — Academic Programs |
McGill University | Faculty of Education | Technology, Learning & Cognition Lab: **McGill.ca/tlc**

> On Jan 4, 2022, at 10:59 AM, Vanessa Bridgman, Ms. <vanessa.bridgman@mcgill.ca> wrote:
>
> Hi Adam,
>
> It seems as though the missing approvals are for the program proposal. Could you kindly reply to this email indicating your approval of the new Graduate Certificate Foundations in Health Sciences Education program, on behalf of Education's Academic Policy Committee?
>
> Thank you,
> -Vanessa
>
> ---
>
> **From:** Alenoush Saroyan, Dr. <alenoush.saroyan@mcgill.ca>
> **Sent:** December 20, 2021 3:18 PM
> **To:** Vanessa Bridgman, Ms. <vanessa.bridgman@mcgill.ca>; Adam Dubé, Dr. <adam.dube@mcgill.ca>
> **Cc:** Linda Snell, Dr <linda.snell@mcgill.ca>; Kimberly John - Faculty Curriculum Committee <fcc.med@mcgill.ca>
> **Subject:** Fwd: Feedback on proposals submitted for CGPS- January 17th
>
> Hi Adam and Vanessa,
> Please see comment from Chloe in CGPS. The proposal was accepted by the Fac of Ed. APC but there is no record of approval. Can you please address this? I will take care of the other comments.
> Thanks.
> Alenoush
>
> Sent from my iPad
>
> Begin forwarded message:

Graduate Certificate in Foundations in Health Sciences Education - Support Document

Context

Health sciences education (HSE) is an emerging field that integrates education and health care, focusing on the teaching and learning of future health sciences professionals. These health sciences professionals are clinicians in health fields or are basic/social scientists working in areas related to health. An effective HSE program will require the combination of learning in both the classroom and the clinical environment as well as authentic instructional and assessment approaches. Many topics in HSE arise from and apply to clinical practice and learning. The field continues to grow in response to changes in health care, new methods and means of instructional delivery, and increasing demands for evidence-informed teaching and learning in the health professions.

As the field has grown, so has the demand for advanced education programs in HSE related to the development of academic career tracks in education within health professions schools. Emphasis on quality education, innovative curricular models, accreditation practices in HSE globally, and the 'professionalization' of health professions educators with the need for credentialed experts in this area have further bolstered this demand. Ideal graduates of these programs are expected to have knowledge of contemporary psychological and educational theories, as well as the expertise to apply this knowledge in the design of curricula, instruction, assessment, and program evaluation. They also are expected to demonstrate that they know and can apply concepts of education leadership and scholarship in their role as educators. To date, most programs geared to address this demand are general degree programs (e.g., education or educational psychology) or are in the form of professional development opportunities (e.g., fellowship programs, faculty development activities). Most instances of the former do not focus on the context in which health science professionals work. For example, some Master's programs (including McGill's M.A. in Educational Psychology, Health Professions Education concentration) emphasize education research. Furthermore, these programs are typically structured in a way that may not be time-feasible for practicing health professionals or academics. By contrast, the latter kinds of programs lack the depth necessary to address the needs of the field. At McGill, there has been a demand for a program that would provide contextualized content in a format that is feasible for health professional/health science teachers and education leaders.

Strategic Priority

The context and needs described above provide an opportunity for McGill to draw on the expertise of two Faculties— Medicine and Health Sciences & Education—to emerge as a leading innovator in this area. The proposed Graduate Certificate in Foundations in Health Sciences Education delivers program content contextualized in HSE in a blended learning format to accommodate and address the needs of health professionals and health sciences educators. Importantly, the program advances the strategic priorities of the Faculty of Education (FY20) and Faculty of Medicine and Health Sciences (Education Strategic Plan). It is the expressed interest of the current deans of both Faculties to address these strategic priorities by combining the expertise within both Faculties to develop and deliver a Graduate Certificate program in Health Sciences Education.

Part of the mission of McGill's new Institute for Health Science Education (IHSE) in the Faculty of Medicine and Health Sciences is to 'educate future and current health care professionals' in education, and one of the main goals of the IHSE is to offer graduate programs in HSE. The IHSE emphasizes interdisciplinary (e.g., collaborating with other Faculties, such as Education) and interprofessional (i.e., all health professions) education. Increasing the cohort of skilled educators and leaders in health sciences education with expertise in curriculum design and assessment, leadership, and education scholarship will fill vital roles in the health professions units of universities across Quebec, including McGill. (Currently, within McGill, some health professions faculties (e.g., Dentistry) and schools (e.g., Nursing), along with the basic science departments, have no formal education 'units,' and few education-trained professionals, if any.)

Program Specifications

The proposed self-funded Graduate Certificate in Foundations in Health Sciences Education program is an initial step in a joint endeavour between the Faculty of Education and the Faculty of Medicine and Health Sciences. This 15-credit program (comprised of five courses) will be offered jointly by the Faculties of Education and Medicine and Health Sciences. Delivery will be over 11 months, in a structured, blended learning format—in order to meet the needs and availability of the target audience, who are primarily physicians and other health sciences professionals. The first course offers a review of contemporary educational and psychological theories relevant to teaching and learning, curriculum design, and assessment. The remaining four courses cover foundational concepts in areas that are deemed essential for the training of health sciences educators: curriculum and course design, assessment and evaluation, leadership, and scholarship. Furthermore, each of the latter four courses forms the basis for future graduate certificate programs, which we envision offering in each of these specialized areas. The completion of the present Foundations Graduate Certificate and two of the abovementioned graduate certificate programs would lead to a Master's degree.

Blended Learning Format

A notable feature of the blended learning delivery format is that of "learning time," similar to the European Credit Transfer System (ECTS), which is used to frame the duration of instruction (instead of contact hours). Each course comprises 130 hours, for a total amount of learning time for this graduate certificate of 650 hours. This exceeds the 450 hours recommended by the European Commission (28-30 hours per credit , 90 hours recommended by experts in the design of on-line learning (see for example Dave Cormier), and 120 hours associated with the Carnegie Unit. Learning time includes all forms of instruction and associated activities: lectures, group and individual activities, assignments, readings, projects, and other instructional and learning activities that occur during face-to-face and on-line instruction that can be both synchronous and asynchronous.

The blended learning format comprises two components: (a) face-to face instruction offered on campus (two weeks at the beginning of the program and one week in the middle), and (b) on-line instruction with both synchronous and asynchronous learning. Courses are offered in sequence and within fixed periods to a specific cohort to foster a sense of community of practice, accommodate the synchronous on-line activities component of courses, and ensure the timely completion of the program. Assignments are planned to enable students to apply and integrate content from one course with another. Accumulated assignments, demonstrating the application of content acquired to individual contexts, comprise a usable portfolio applicable to the context in which the individual practices. Combined, the courses target the following overall objectives and competencies:

a)   Describe concepts, theories and evidence-based practices relevant to teaching and learning, curriculum and course design, assessment and evaluation, leadership, and scholarship in HSE;

b)   Critically evaluate strengths and limitation of these concepts, theories and practices, and describe their relevance to specific professional contexts;

c)   Apply relevant concepts, theories, and practices to teaching, assessment, leadership, and scholarship activities in specific professional contexts.

The face-to-face component is considered particularly important in allowing students to maximize opportunities for social learning, relationship building, and the development of a community of practice.

Assessment

Assessment of student learning is through individual and group projects and presentations, some of which will build upon content from preceding courses. In the blended-learning model used for planning this program, courses have reduced face-to-face (F2F) time. However, that reduction is replaced by carefully planned and pedagogically valuable activities, which are an integral part of the curriculum. This approach is not the same as providing self-instructional modules that can be completed anywhere at any time. The class extends beyond the classroom whether that classroom is a traditional F2F classroom or a class held virtually. Students will be working collaboratively in learning teams outside of class. Their genuine collaboration with their peers on carefully constructed problems is not an optional activity. This goes far beyond coming to class on time, doing the homework, and participating in class discussions. The weighting allocated to participation reflects the significant value placed on these structured activities. Participation is evaluated with a comprehensive rubric.

Program Structure

Diagram 1: Program Timeline

| Start date: 28 August | | | | | | |

| Sep. - Oct. | Oct. - Dec. | Jan. – Feb. |

| Mar. – Apr. | May - June |

| July |
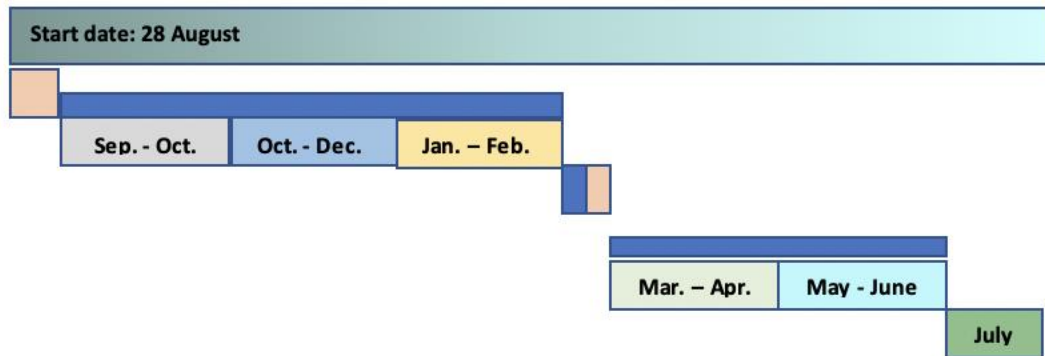
Face to Face	Starting fall term – Face-to- Face – 10 days (60 hrs.), orientation to program; introduction to Courses 1, 2, & 3.
On-line	21 weeks, 7 weeks each for Courses 1, 2, & 3
EDPE - 657	Course 1. Learning, Cognition, & Motivation in HSE
EDPE - 658	Course 2. Introduction to Curriculum & Program Development in HSE
EDPE - 659	Course 3. Introduction to Assessment & Evaluation in HSE
	On-line; 5 days orientation to Courses 4 & 5
	Face-to-Face, 5 days (30 hrs.), introduction to Courses 4 & 5
On-line	14 weeks, 7 weeks each for Courses 4 & 5
HSED - 601	Course 4. Introduction to Leadership in HSE
HSED - 602	Course 5. Introduction to Scholarship in HSE
Wrap-up Event	Virtual or in person

Online instruction

Activities during online instruction are either asynchronous or synchronous. The asynchronous component includes live or recorded lectures, complementary videos, case studies, directions for independent work (e.g., guided readings, reflection, individual assignments such as case-based work, etc.). The synchronous component includes small group work, self-
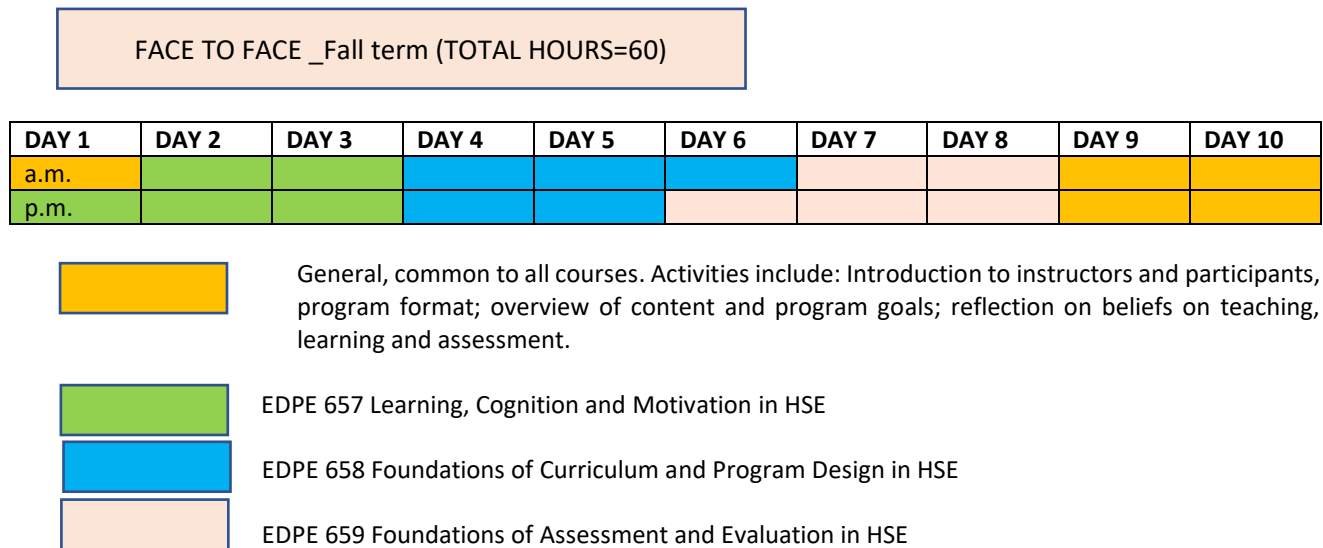
assessment activities discussion panels, presentations with peer and instructor feedback, individual and small group virtual meetings with the instructor.

Face-to-face

1) *Fall Term*

The face-to-face instruction is conceptualized in modules, each module comprising three (3) hours. During the initial ten (10) days of face-to face instruction, at the start of the term, there will be a total of twenty (20) modules: five (5) pertaining to general content and fifteen (15) to the three EDPE-prefixed courses (*see Diagram B*). As the courses are developed concurrently through a process of on-going consultation, the terminology used is consistent across courses. Similarly, course-related activities and assignments are designed to cumulatively lead to a usable portfolio with detailed specifications to implement a program within the context of each individual's practice. Activities in the three courses include lectures and discussion, case work, group work, independent work, and presentation by students.
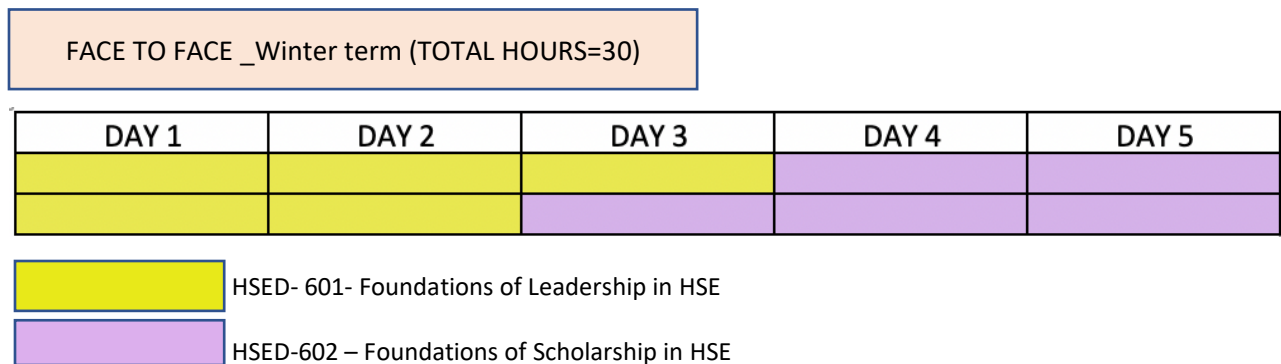
Diagram B: Face-to-Face schedule at start of Fall term

FACE TO FACE _Fall term (TOTAL HOURS=60)

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
a.m.										
p.m.										

General, common to all courses. Activities include: Introduction to instructors and participants, program format; overview of content and program goals; reflection on beliefs on teaching, learning and assessment.

EDPE 657 Learning, Cognition and Motivation in HSE

EDPE 658 Foundations of Curriculum and Program Design in HSE

EDPE 659 Foundations of Assessment and Evaluation in HSE

2) *Winter Term*

During the five days of the mid-certificate F2F week (in the Winter term) there will be ten (10) modules: five (5) on Leadership and five (5) Education Scholarship (*see Diagram C*). Activities in the two courses include lectures and discussion, case work, group work, independent work, and presentation by students. Although there are no specific 'integration modules,' there will be some assignments requiring content from both these courses. As this F2F is shorter than the previous two-week block, there will be some online learning activities in the two weeks prior to provide a background: these include an introduction to the two courses, videos, self-assessments, exercises, and readings.

Diagram C: Mid-Certificate F2F Schedule

FACE TO FACE _Winter term (TOTAL HOURS=30)

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5

HSED- 601- Foundations of Leadership in HSE

HSED-602 – Foundations of Scholarship in HSE

Comparable Programs

Quebec
Université Laval offers a '[micro-programme' in Health Sciences Pedagogy](#) (as an asynchronous distance program offered by a single Faculty).

Canada
In Canada, McMaster offers a recently developed Master's in a blended-learning format, and the University of Ottawa offers a 15-credit Diploma program, similar in scope and content to Laval's. Thus, the proposed HSE Certificate program differs from and is a valuable addition to the offerings by Quebec and other Canadian universities.

International
The top 3 master's programs (out of over 100) are the ones offered by the University of Illinois at Chicago (UIC), University of Dundee (Scotland), and Maastricht University (The Netherlands). Their curricular content is similar to McGill's existing Masters' program (Educational Psychology, HPE concentration). Of these, Dundee's is 'stackable,' with the opportunity to do parts as a certificate or a diploma. The Universities of Cardiff, Edinburgh, and Ottawa also offer similar 'stackable' masters. UIC and Maastricht are graduate degrees, primarily offered online with a mandatory 1-2 weeks a year residency.

In sum, our proposed Graduate Certificate program has combined the best features of existing programs, rendering it the only program with such characteristics in Quebec, and positioning itself among the best programs in the world:

a) It is a Graduate Certificate program, short enough to be attractive and 'do-able' for health sciences professionals and health science educators;

b) It lends itself to a future 'stackable' Master's degree at McGill by providing the essential foundations for all health science educators; further specialization through additional certificates in teaching and learning, curriculum and course design, assessment and evaluation, leadership, and scholarship would lead to a Master's degree.

c) It is offered in a blended-learning format, making it accessible to health sciences professionals locally, nationally, and internationally;

d) Courses are offered in sequence to ensure that coherent conceptual development and practical application, as well as timely completion of the program;

e) Its curricular content is specific to the context of health sciences and relevant to the needs of health sciences educators, professionals, and academics;

f) It is developed and offered jointly by the Faculties and Medicine and Health Sciences & Education, drawing on the combined expertise of these two Faculties.

This Graduate Certificate Program will be self-funded.

Timeline **for Approval Process**