

McMASTER UNIVERSITY
GRADUATE PROGRAM PROPOSAL BRIEF
FOR THE PROGRAM
MASTER OF ARTS IN MUSIC EDUCATION AND COGNITION
[MMEC]
January 16 2015

TABLE OF CONTENTS

1. PROGRAM	4
1.1. Consistency of program with University’s mission and academic plan.	
1.2. Clarity and appropriateness of program requirements and learning outcomes in meeting University’s Degree Level Expectations.	
1.3. Appropriateness of degree nomenclature.	
2. ADMISSION REQUIREMENTS	9
2.1. Appropriateness of program’s admission requirements for the learning outcomes established for completion of the program.	
2.2. Alternative requirements for admission into the program.	
3. STRUCTURE	10
3.1. Appropriateness of the administrative, governance and communication processes proposed in support of the program.	
3.2. Appropriateness of program’s structure and regulations to meet specified program learning outcomes and Degree Level Expectations.	
3.3. Rationale for program length.	
4. PROGRAM CONTENT	13
4.1. How curriculum addresses the current state of the discipline or area of study.	
4.2. Unique curriculum or program innovations or creative components.	
4.3. Nature and suitability of major research requirements.	
4.4. Appropriateness of the courses for the graduate degrees.	
5. MODE OF DELIVERY	15
5.1. Appropriateness of proposed mode of delivery to meet the program learning outcomes and Degree Expectations and availability of necessary physical resources.	
6. ASSESSMENT OF TEACHING AND LEARNING	16
6.1. Appropriateness of propose methods of instruction and assessment of student achievement.	
6.2. Plans for documenting and demonstrating the level of performance of students.	
7. RESOURCES FOR ALL PROGRAMS	17
7.1. Administrative unit’s planned utilization of existing human, physical and financial resources and any institutional commitment to supplement the resources.	
7.2. Participation of a sufficient number and quality of faculty who are competent to teach and/or supervise in the program.	
7.3. Evidence of adequate resources to sustain the quality of scholarship produced.	
8. RESOURCES FOR GRADUATE PROGRAMS	18
8.1. Plan for adequate numbers of faculty and staff to achieve program’s goals	
8.2. Plan to provide necessary financial assistance for students.	
8.3. Evidence that faculty research supervisors have ongoing funding, space and relevant research infrastructure to support students in program.	
8.4. Supervisory and load distribution and qualification.	
8.5. Evidence of prior experience in graduate teaching and research supervision for faculty.	

9. QUALITY AND OTHER INDICATORS	19
9.2. Evidence of a program structure and faculty research that will ensure the intellectual quality of the student experience.	
10. CONSULTATION PROCESS	20
10.1. Description of the consultation process undertaken during the development of the proposal.	
11. APPENDICES	21
11.1. Course descriptions.	21
11.2. Schedule for the Program.	27
11.3. Costing and Budget Sheets (attached).	
11.4. PLOGDL Teaching and Learning Outcome Spreadsheet (attached).	
11.5. Faculty teaching and supervision.	27
11.6. Research facilities.	29
11.7. Library and database resources (attached).	
11.8. Faculty Professional biographies.	30
11.9. Faculty full CVs (attached).	
11.10. Endorsements (attached).	

1. PROGRAM

1.1. Consistency of program with University's mission and academic plan.

Recent years have seen tremendous advances in the fields of cognition and education. Allied with these advances have been important initiatives connecting health with the arts. This program aims to equip music educators and leaders in Ontario with knowledge and tools that will enable them to apply these advances in our understanding to “real world” situations, thereby enhancing our educational programs for the future, and enriching our contemporary community musical experiences. “One sentence from *Forward with Integrity* that seems to have resonated across campus these last two years is the simple assertion that ‘we are an institution devoted to the cultivation of human potential.’ Whatever validity and reasonableness we may wish to ascribe to other claims for what it is we are supposed to be doing in a university—equipping people to earn a living and to build a career, for example—those pale in comparison with the much greater ambition of fostering the human potential of our students, ourselves, and our society.”¹

The central focus of the M.A. in Music Education and Cognition is the enhancement of culture, the enrichment of individual experience, and the integration and well-being of community and society through the development of strong and visionary leaders in Music Education and Cognition who will be equipped to foster passion and excitement for music at all ages and in a variety of contexts. The goal of the proposed program is to offer students a high-quality course of study that develops and enhances their understanding of the principles and practice of music in relationship to the broader contexts of human interaction, education, cognition, and society. This program supports active community engagement with music in schools, studios, amateur and professional music ensembles, and community organizations. Through application of expert knowledge in cognition and education we aim to enhance community wellness and to provide an integrated environment in which the arts can flourish in Ontario as part of an overall strategy of health and community.

Recent research has revealed that exposure to and engagement with music can bring about beneficial changes within cognition and can be used to modify and repair impaired-brain functioning; different types of developmental assets, both personal and social, are acquired from learning music, which, in turn, can have positive effects on emotional and psychological states; music fosters social well-being and can be used to improve the quality of life of vulnerable people within the community. This program will link neuroscience, cognitive science and educational research with music through a unique set of specially designed courses delivered by highly qualified faculty with interdisciplinary interests and skills. It will prepare students to use some of the most recent breakthroughs within the field of music education and cognition, preparing them to be innovators within the field of music cognition research, the education profession, and the broader music-making community. In doing so, it will prepare students to deal with complex concepts and the body of knowledge required of modern music-professionals.

¹ Patrick Deane, “FWI: REFLECTIONS ON THE LANDSCAPE”. October 8, 2013.

The program is connected directly with the research interests and activities of the music faculty. The range of courses offered grows out of the research foci of the faculty, and connects with the most relevant nodal points where music interacts with society on multiple levels, whether in early-childhood development, the Ontario School Music Program, music in the community, or cutting edge research in the psychology of music. Current research activities of faculty will serve as models for best practice in the field.

The program is interdisciplinary in that it brings together two areas of concentration, Education and Cognition, the former being strongly connected to community and to professions that engage with all levels of society from infancy to old age; the latter being focused on the research element, and connecting strongly with psychology and other disciplines—education alone, without a strong theoretical foundation is not robust; research alone without the practical connection to the community is nebulous. Faculty and students will be involved in a range of research activities in both the lab and the community: in community music ensembles, in private studios, and in the school systems. Together these two areas of concentration, education and cognition, build strong, balanced researcher-practitioners that are qualified to take leadership roles in the community, in public and private education, and to continue to pursue higher education at the doctorate level.

The program will encourage entrants directly from Bachelor's degrees, as well as more mature students from a range of professional and educational fields in the music industry. These goals are in harmony with McMaster's mission; we believe that the unique and innovative features of the program, coupled with an outstanding faculty will indeed contribute to McMaster's vision of "international distinction for creativity, innovation and excellence".² Central to the program is its intention to offer courses that are taught by active researchers in areas that are closely related to their research. In doing so, it aspires to foster critical thinking and a passion for learning among its students. The program is linked to the scholarly interests and activity of the Music faculty.

In accord with McMaster's vision, and its recent initiative, the Network for Community Campus Partnerships, the skills developed in this program will enable students to continue to grow after graduation as they contribute to their community music and educational organizations, and will enhance their career possibilities as they engage with a broader array of knowledge and professional skills.

The program is course based, requiring the completion of seven half-courses, plus one non-credit pass/fail course. The program is built around a core of five courses, MMEC 701-705 which explore key components of the program—Music Cognition, Research Methods, Community Music and Wellbeing, Musical Development and Education, and Music Analysis. Students are required to complete four of these five courses.

Surrounding this core is a series of additional courses that round out the program and provide a range of choices to the student. MMEC 706 is a reading course that allows the student to explore a particular area of interest in greater detail; MMEC 707 and 708 are Minor and Major Research Projects that give the student the opportunity for a more extensive experience in independent research. MMEC 709 and 710 are performance courses that provide opportunities to expand their musical potential and to apply

² *McMaster Institutional Vision, Mission and Proposed Mandate Statement*, March, 2014.

theoretical concepts in music-making. MMEC 711, the Portfolio, a non-credit pass/fail course, is a forum which supports students in bringing all the threads of their graduate experience into a single comprehensive package.

A series of electives at the 600 and 700-levels provides opportunities for students to broaden their educational experience in both music and in related fields of inquiry, such as Cognitive Science of Language, Communication and New Media, Cultural Studies and Critical Theory, and Psychology, Neuroscience and Behaviour.

We have designed this program to be especially economical in terms of the use of faculty, administration, and physical resources. It requires only 9 units of instruction per year beyond our current offerings and it uses existing administrative resources. The existing range of laboratory and seminar spaces in the School of the Arts, will serve the needs of this new program.

McMaster is an ideal site for this new program, both in terms of the Music Faculty Complement, but also in terms of the broader academic and research contexts of centers such as CanChild, Collaborations for Health, Communication Studies, the Institute on Globalization & the Human Condition, Health, Aging, & Society, the Cognitive Science and Language Program, McMaster Institute for Innovation and Excellence in Teaching and Learning (MIETL), and McMaster Institute for Music and the Mind (MIMM).

In harmony with McMaster's goals, we will foster in-depth inquiry into the cognitive foundations of music, along with exposure to the richness of this nascent field of human exploration; we will be encouraging and equipping graduates to share their knowledge and enthusiasm with all levels of community music making; and we will be training young scholars in preparation for further study beyond the Masters degree.

According to McMaster's Vision Statement, "Research excellence and graduate education are inextricably linked. World-class researchers attract top graduate students, and top graduate students and postdoctoral researchers play an important role in expanding the University's research reputation. But universities will also be faced with increased demand for broadly based interdisciplinary Masters programs as educational expectations in society rise." We have built a proposal that matches the expectations of this vision statement.

The need for such a program in Ontario

Research indicates that music education contributes to cognitive development: stronger connections between brain regions, more grey matter, improved brain structure and function, better memory and attention, higher IQ.³ The quality of a child's music education is linked to their academic achievement. Elementary school students in higher quality music education programs had 20% improvement in standardized tests of English and math.⁴ The thrust of this new program is to give teachers and leaders the skills and knowledge to be able to make this difference in learning and in cognitive development,

³ E. Glen Schellenberg, "Music Lessons Enhance IQ" *Psychological Science* 15.

⁴ C. M. Johnson and J. E. Memott, "Examination of Relationships between Participants in School Music Programs of Differing Quality and Standardized Test Results", *Journal of Research in Music Education*. Vol. 54 (Winter 2006), Number 4.

building stronger minds for Ontario's knowledge-based economy. We believe strongly that this approach will be of particular service to the disadvantaged in our society, who often fail to live up to their potential due to insufficient quality of musical leadership and involvement.

This program is about connecting the principles of music cognition with their application in real-world situations from infancy through to adulthood. While we include classroom pedagogical strategies in the program, our focus is based more broadly on how people learn music, and on how this new wave of evidence-based knowledge can be implemented in music learning at all ages.

Our program will appeal to an array of students and professionals: professional music teachers, performers who are interested in teaching inside and outside of the usual school system, and private studio teachers, as well as an array of community music leaders.

Six Ontario universities offer master's degrees in music, with a variety of foci (see Table 1). These programs can be classified as (a) academic programs (Carleton, Ottawa, Toronto-Musicology, and York) which prepare students for Ph.D. studies; (b) Music Education programs (Toronto, Western), which are terminal degrees intended to ramp up the skill-sets of school music teachers; and (c) music and health (Wilfrid Laurier). The MMT at Wilfrid Laurier is a specialized technical program; the MA in Community Music is a brand-new program which is intended to enhance the skills of community music leaders.

In comparison to the above programs, the proposed MA in Music Education and Cognition at McMaster is distinctive in that it combines an academic rigour on the Music Cognition side, with an outreach and community directed focus on the Music Education side.

Table 1. For each university, only the master's programs most closely related to this proposal are included.

School	Degree	Focus of the program	Program length
Carleton	M.A.	Music and Culture	2 years
McMaster	M.A.	Music Education and Cognition	1.5 years
Ottawa	M.A.	Musicology or Theory	2 years
Toronto	M.A.	Musicology Music Education	2 years 1 year
Western	M.A.	Music Education	2 years
Wilfrid Laurier	M.A. MMT	Community Music Music Therapy	2 years 2 years
York	MA	Musicology	2 years

Through the international exposure and attention attracted by the McMaster Institute for Music and the Mind and our exciting young faculty, music faculty members are regularly contacted by prospective students interested in pursuing graduate musical study at McMaster. The recent opening of the LIVE Lab has further enhanced McMaster's reputation as an international hub for music cognition research. The 2016

opening of L.R. Wilson Hall, McMaster's new home for the liberal arts, which will include a state-of the art concert hall, practice and performance studios, will further enhance McMaster's reputation for the arts and more strongly connect it with the community. Our burgeoning and unique B. Mus. in Music Cognition is also producing a continual demand from students who see the value of this field of study and would like to enhance their knowledge and skills.

Graduates from our program will have a deep insight into the cognitive aspects of music and their application to music education. Graduates will be uniquely qualified, whether they continue into further education and research, into the teaching profession, or into community music making. They will be equipped to apply the insights of the latest research in music education and cognition to practical applications in the community, in infant musical-exposure and interaction, in the school system, in the private teaching studio, and in community music programs and performing ensembles. They will bring a deeper understanding to their practice as performers, teachers, and music leaders.

We expect that most graduates of this will program will directly apply their knowledge and skills in improving the quality of music education in the Province of Ontario, building stronger minds capable of competing in the global economy of the future. Others will directly apply their knowledge in raising the quality of music instruction in private music schools and studios throughout the province. Still others will take their knowledge and skills into the world of community music-making, where life-long learning and wellness are explored as keys to a healthy society. Others will apply their knowledge directly in their own professional music-making in the thriving music industry of the Hamilton and Toronto regions. Still others will use this program as a springboard to further research and development in doctoral programs in Canada and abroad.

1.2. Clarity and appropriateness of program requirements and learning outcomes in meeting the University's Degree Level Expectations

Growing out of our overall objectives and context stated above, we have generated a series of Program Learning Outcomes that will equip graduates appropriately for work in the field. The following table lists the Program Learning Outcomes and indicates how they align with the requirements of the University's Degree Level Expectations for the Master of Arts.

Program Learning Outcomes (PLOs) A Student graduating with an M.A. in Music Education and Cognition will . . .	Degree Learning Expectations (DLEs) This degree is awarded to students who have demonstrated:
1. be able to work with the materials of music at a high level of competence. 2. be able to foster a healthy attitude in the community through music.	1. Depth and Breadth of Knowledge.
3. be familiar with current literature and concepts in the fields of music education and cognition. 4. be able to apply appropriate principles of Music Education and Cognition to a variety	2. Knowledge of Methodologies.

of research and teaching contexts, including appropriate methodologies.	
5. be able to engage in applied research and original evidence-based research to a specific problem or issue in music education and/or cognition.	3 . Level of Application of Knowledge.
6. be able to undertake projects in independent and group settings, including motivation, cooperation and intellectual integrity. 7. have an understanding of ethical behavior consistent with academic integrity and appropriate professional judgments. 8. be able to empirically assess the validity of theoretical claims and visualize data to explore complex issues	4. Professional Capacity/Autonomy.
9. be able to communicate effectively, both orally and in writing, in a professional setting. 10. be able to explain how outcomes based in one domain of knowledge (i.e. cognitive development) can inform and improve inquiries based in another (i.e. music education).	5. Level of Communication Skills.
11. be able to contextualize their experience of music education and cognition within the broader fields of musicology, education, psychology, and community.	6. Awareness of Limits of Knowledge.

1.3. Appropriateness of degree nomenclature

M.A. in Music Education and Cognition is the most appropriate choice for the degree name. The program is designated Masters because it meets the DLEs of the Masters Level, and builds upon the entry level expectations of a Bachelor's degree. Master of Arts is appropriate in that it aligns with the standard nomenclature that covers these fields. The discipline is labeled Music Education and Cognition because these two aspects and their interconnection are the core of our program in its humanistic exploration of music in its experiential context, and it is suggestive of both the practical and scholarly components which form the degree.

2. ADMISSION REQUIREMENTS

2.1. Appropriateness of program's admission requirements for the learning outcomes established for completion of the program

Students will typically enter the program having completed an Honours Bachelor's Degree in Music with an excellent academic record, and thus will be prepared to

undertake the requirements for the Master's degree. Students may be admitted from other backgrounds, and community music practitioners will be encouraged to apply on the basis of the diverse educational and experiential backgrounds that they have attained.

Admission requirements (summary)

Honours Bachelor degree or equivalent in Music with a minimum B+ average grade from an accredited university.

Two letters of reference, preferably from former university professors.

For international students, an official statement of English language test results (TOEFL or IELTS). TOEFL must be at least equal to the minimum requirement set by the University, and would be expected to be higher.

Statement of intent and background preparation.

Undergraduate research paper or other sample of scholarly research and writing.

2.2. Alternative requirements for admission into the program

As noted above, other degrees or qualifications or experience will be considered on a case by case basis.

In order to attract a deep pool of high quality applicants, we propose that prior work experience not be required as a condition for admission. We also propose to consider candidates with recognized bachelor degrees from various academic disciplines, provided that they demonstrate sufficient practical and theoretical skills and knowledge of music.

While the general notion of target applicants to this program includes music educators and scholars, we are interested in a broader range than simply classroom music teachers, such as: those engaged in creating and/or making music in schools, places of worship, community ensembles (bands, choirs, orchestras), retirement homes, private music studios, and other community venues.

Students coming into the program will, on the basis of these requirements, have the appropriate preparation to enable them to meet or exceed the PLOs/DLEs for this program within the normal course of study.

3. STRUCTURE

3.1. Appropriateness of the administrative, governance and communication processes proposed in support of the program

Program structure.

The program is course-based (7 half-courses), normally occupying the Fall, Winter and subsequent Fall terms. There is an option to do either a minor research project in lieu of one half-course, or a major research project in lieu of two half-courses. These independent courses may take place during the regular terms (Fall, Winter, Fall), or can also be completed in the Spring and/or Summer term before the final Fall term, subject to supervisor approval. Students may complete this program on a part-time basis.

Students will take at least four of the five core course (MMEC 701-705). These courses focus on developing students' analytical skills and broadening their understanding of the core concepts of music education and cognition. The tools and

knowledge students acquired throughout the program will be used to formulate and assess important problems within the field, and to develop strategies for their implementation. Students will be expected to read and evaluate current literature and be able to utilize their knowledge to investigate the types of problems they might encounter in their professional careers. Knowledge, intellectual progress and understanding will be measured in a variety of ways, including problem solving, discussion of scholarly papers, class presentations of their work, written assignments and papers, and course examinations.

Additional courses (MMEC 706 through 710) round out the program and provide a range of choices to the student. They also provide opportunities for a more extensive experience in independent research.

All students will also enroll in MMEC 711 Portfolio (non credit pass/fail), through which students will document the range and quality of their achievements in the program.

A series of electives at the 600 and 700-levels provides opportunities for students to broaden their educational experience in both music and in related fields of inquiry, such as Cognitive Science of Language, Communication and New Media, Cultural Studies and Critical Theory, and Psychology, Neuroscience and Behaviour.

Governance structure

The Program will be administered by a Program Director appointed by the SOTA director in consultation with the music faculty. The Program Director will report to the Associate Dean, Graduate Studies and Research, and will also work with the appropriate offices and individuals, primarily within the School of the Arts, on the various activities involved in delivering the program, including student recruitment, financial assistance and academic advising, curriculum planning and implementation, instructional support, and student career preparation. The Program Director will be responsible for ensuring that the program's admission criteria are properly implemented and that all academic regulations governing the program and its students are properly applied.

Governance will be through an Academic Committee, comprising four members of the Music Faculty including the Program Director. The Academic Committee will provide academic direction and guidance to the Program.

Administration will be through the School of the Arts staff, in conjunction with the School of Graduate Studies. Among the responsibilities of the administration will be the clerical duties associated with publicity, recruitment, admission, student financial aid and scholarships, and community coordination.

The proposed governance structure and initial composition of members is outlined below.

i. Program Director

William Renwick (acting)

ii. Academic Committee

School of the Arts

1. Dr. Rachel Rensink-Hoff
2. Dr. William Renwick
3. Dr. Michael Schultz
4. Dr. Matthew Woolhouse

Communication

The Program Director, supported by the staff, will be responsible for ensuring that all communications related to the program are directed to the appropriate individuals and University bodies. As stated above, the Program Director will report to the Associate Dean, Graduate Studies and Research in the Humanities.

3.2. Appropriateness of program's structure and regulations to meet specified program learning outcomes

The three terms (Fall, Winter, Fall)⁵ of the full-time program provide a substantial period of teaching and learning to meet the Program Learning Outcomes. As the Table in section 5.1 indicates, the required PLOs can be attained through a variety of course combinations; students will have a degree of flexibility and choice while they are completing the degree requirements.

Amongst the core courses (Music 701-705) there is no prerequisite structure. They may be taken in any order and are considered complementary to one another. This open structure will be of particular assistance to part-time students. Students are required to complete four of these core courses; any combination of the four will cover all the Program Learning Outcomes demanded of the program. Successful course completion requires a grade of B- or above.

Students graduating from the program must meet the expectation of the program as well as the University's Degree Level Expectations for a master's degree.

3.3. Rationale for program length

The full-time program comprises three terms, fall, winter, and fall. The intervening spring and summer terms may be used by students pursuing independent research projects. A total of 7 credit half-courses (or project equivalent) is required. Each course is one term, so students will take 2-3 courses per term. This format and length provides students with their analytical tool-kit and contextual background, focusing on the core themes of music education and cognition and providing them with an opportunity to investigate specialized topics. The first fall term provides students with fundamental knowledge and skills in Music and the Mind. The winter term is devoted to deepening students' understanding of analytical skills as well as their knowledge of a theoretical framework and problems in Music Education and Cognition. The final fall term comprises a combination of analytical applications of concepts learned in earlier terms and opportunities for students to focus on topics of particular interest. The fall term is of particular importance in that during that time the new cohort will have strong interactions and mentorship from the old cohort of the previous year, thus maintaining a sense of continuity in the program from year to year.

Part-time students will be accommodated both in terms of extended program length and through appropriate course-scheduling to be developed in response to the needs of the evolving student body.

⁵ Students electing MMEC 706, 707 or 708 will have the option of completing these courses during the spring and/or summer terms, with the permission of the instructor.

4. PROGRAM CONTENT

4.1. How curriculum addresses the current state of the discipline or area of study

Current trends in music education and research are strongly focused towards music cognition, music in community, and music in human development and health. Building on McMaster's recognized excellence in Health Education and in Music and the Mind, this program will allow students who are neither science nor health majors, but who are already, or intend to be, active leaders in our communities, institutions, and schools, to connect with music in the areas of cognition, education, and community.

Courses will generally contain components of literature review, which give appropriate background context and connection with current trends, as well as independent and group projects and studies that will enable students to experience the classroom concepts in practice.

The core courses, MMEC 701-705 focus on principal areas and themes of the program. These are supplemented by a range of elective courses MMEC 706-711 and MMEC 6H03, 6MT3, 6OC3, 6V03 and 6Y03 that expand upon the core. This range of offerings is then further expanded and contextualized through the offering of electives from other disciplines across the university. The required course MMEC 711 provides for the production of a summative portfolio.

Core Courses

Students must complete four of the following core courses.

MMEC 701: Issues in Music Cognition

MMEC 702: Research Methods in Music Cognition

MMEC 703: Community Music & Wellbeing

MMEC 704: Musical Development & Education

MMEC 705: Seminar in Music Theory and Analysis

Required non credit pass/fail course

MMEC 711: Portfolio

Elective Courses

MMEC 706: Reading Course (3-unit half-course: subject to instructor approval)

MMEC 707: Minor project (3-unit half-course: subject to instructor approval)

MMEC 708: Major project (6-unit full-course: subject to instructor approval)

MMEC 709: Instrumental Lessons (3 units) (self-funding)

MMEC 710: Instrumental Lessons (6 units) (self-funding)

MMEC 711: Portfolio (course with no instruction)

The following courses will be cross-listed with similarly themed third- and fourth-level offerings. They will provide more variety in the program and permit students additional focus on areas of special interest.⁶

⁶ Note: we would also like to create a second undergraduate course in Music Therapy that would be cross-listed to form the course MMEC 6MT3: Music Therapy in Practice. This would serve to better link our

MMEC 6H03: Seminar in Tonal Analysis (c-1 with Music 4H03)
 MMEC 6OC3: Advanced Choral Methods (c-1 with MUSIC 4OC3)
 MMEC 6V03: Seminar in Music Education (c-1 with MUSIC 3V03)
 MMEC 6Y03: Topics in Musicology (c-1 with MUSIC 4Y03)

Suggested elective courses outside Music

Other electives from across the University may be chosen with the approval of the Program Director and the consent of the department involved. Possible courses the themes of which intersect with this program include the following:

Cognitive Science of Language

COGSCIL 721: Fundamentals of the Cognitive neuroscience of Language

Communication and New Media

CSMM 711: Sound as Art and Research

Cultural Studies and Critical Theory

CSCT 705: Music, Gender, and Sexuality

Psychology, Neuroscience and Behaviour

PSYCH 710: Statistics and Research Design

PSYCH 722 / Developmental Psychology

PSYCH 723 / Cognitive Psychology

PSYCH 724 / Perception

PSYCH 726 / Behavioural Neuroscience

PSYCH 727 / Learning

4.2. Unique curriculum or program innovations or creative components

The combination of Music Education and Cognition and will give students a strong academic basis combined with a practical application, whereby the two aspects can be drawn together. In addition, the emphasis on community engagement is intended to encourage students to flourish as musical leaders and innovators in society. Several of the courses connect beyond the university, whether through community involvement, or through web publication and conference presentation. These experiences are intended to better prepare students for the variety of contexts in which they may expect to be involved in the future. Through elective courses, students will also be able to associate with related programs of Cognitive Science of Language, Communication and New Media, Cultural Studies and Critical Theory, and Psychology, Neuroscience and Behaviour. In doing so, the program uniquely prepares students for professional opportunities in which a combination of technical skills and institutional knowledge are important.

4.3. Nature and suitability of major research requirements

The M.A. in Music Education and Cognition is a course-based program. Within each course research requirements will vary, ranging from readings in the area of study, to summary reports, to short independent analyses, studies and applications, and to presentation of findings, whether as term-papers, verbal/visual presentations or internet

program to the health side of campus and to take advantage of the expertise of our instructor in Music Therapy, Rachel Finnerty. However, we are not able to mount this course at this time.

projects. MMEC 702, 703, 704, and 705 each contain a research project; thus the students will have plenty of opportunity to undertake independent research. In addition, MMEC 707 and 708, Minor and Major Independent Research Projects, provide students the opportunity to develop a more in-depth study under the supervision of a faculty member and with the approval of the Program Director. These courses allow for a greater focus and concentration in specific areas of study.

In all cases the nature of the research will be directly connected with the principal goals of the program, the understanding and application of cognition in music education and community involvement.

4.4. Appropriateness of the courses for the graduate degrees

The program normally requires applicants to have an undergraduate degree in Music. The program's courses will utilize resources appropriate for graduate level study and students will be expected to read and critically evaluate original papers from the literature of Music Cognition and Music Education. They will be expected to develop a sound knowledge of the main themes in the literature and their applicability to musical practice. In addition, students will be expected to apply the concepts and tools learned in the courses to a variety of problems in Music Cognition and Music Education.

The 700-level courses all require independent inquiry, research, and presentation at the masters level.

5. MODE OF DELIVERY

5.1. Appropriateness of proposed mode of delivery to meet the Program Learning Outcomes and Degree Level Expectations and availability of necessary physical resources

The program makes use of a range of modes of delivery. Courses are largely in seminar format, comprising lecture, discussion, and small-group work. Learning activities include independent readings in the literature and creative applications, supplemented by class discussion and summary reports. Students will also engage in original research projects, placements in community music organizations, peer-review activities and editorial experience.

Peer-review is an important component of MMEC 703, 704, and 705. Through this process students strengthen their critical skills. Through the process of evaluating the in-progress work of their peers they reflect upon their own understanding and development, and they expand their abilities to interact on a professional level. This process typically results in a much stronger integrity to students' work.

Results of this range of activity will include written reports and oral presentations (individual and group), as well as participation public forums such as McMaster Music and the Mind initiatives, McMaster University Music Education Outreach Series, Music Education and Cognition conferences (when appropriate), and web publication. The Portfolio provides a guided process for students to assemble their completed work into publicly presentable form.

The following table summarizes the way in which the MMEC courses target the Program Learning Outcomes described above. It will be seen that two or more of the five 'core' courses (MMEC 701-705) target each of the PLOs demanded of the program. By

this means we can ensure that all successful students will attain all of the PLOs to a satisfactory level.

Table of PLO coverage for courses.

PLOS	1	2	3	4	5	6	7	8	9	10	11
MMEC 701			x		x	x		x	x		x
MMEC 702	x		x	x	x	x			x	x	
MMEC 703		x		x	x	x	x		x		x
MMEC 704		x	x	x	x	x	x		x	x	x
MMEC 705	x				x	x		x	x		
MMEC 706			x						x		
MMEC 707					x	x			x		
MMEC 708					x	x			x		
MMEC 709	x				x						
MMEC 710	x				x						
MMEC 711						x			x		

Detailed Program Learning Outcomes for each course are provided in Appendix 11.4.

6. ASSESSMENT OF TEACHING AND LEARNING

For most courses the primary method of assessment is instructor evaluation of both on-going work (assignments of various kinds) and of final projects, in terms of the goals set out for each course and in the context of the teaching and learning objectives of the program as a whole. The instructor will also evaluate the students' ongoing contributions to class discussion as examples of quality of public presentation and interaction.

MMEC 703, 704, and 705 include a peer-evaluation component. While this peer evaluation is an important part of the learning process, and serves well as a means to quality control, in all cases the instructor is responsible for the determining the final assessment of attainment of the learning objectives.

The performance courses, MMEC 709 and 710 include a final jury-exam by two faculty members.

The supervisor evaluate MMEC 711 (Portfolio) will evaluate the student's success in demonstrating individual initiative and integrity in preparation of the portfolio, taking into account the full range of Program Learning Outcomes that are expected.

Details regarding the assessment of teaching and learning for each course are provided in Appendix 11.4.

6.1. Appropriateness of proposed methods of instruction and assessment of student achievement

As noted above, instructional methods will include lectures, class discussions, problem solving, case analyses and student presentations, keeping in mind that instructional

methods will vary, both in type and proportion, from course to course. Class sizes of 10-20 will foster individual motivation and interaction.

In addition to the above methods, we believe strongly in community and public connections. To this end our courses include web-publication, conference presentations, campus presentations, and community music ensemble placements.

Suitably qualified and motivated students will be permitted to undertake specialized studies in independent research projects or musical performance.

In all cases we place emphasis on connecting the content and production of the program to 'real-world' experiences that will appropriately qualify students for leadership roles in arts and education.

6.2. Plans for documenting and demonstrating the level of performance of students

For each of the core courses an independent written research project or the equivalent is required. (For details please see the course outlines in Appendix 11.1.) All of these documents will become part of the student's portfolio, as developed under the rubrics of MMEC 711. The portfolios will also contain other samples of student work as deemed appropriate in consultation with the Program Director and with the support of McMaster's student educational services. These portfolios will also be kept on file in the School of the Arts for reference and for future program review and development.

7. RESOURCES FOR ALL PROGRAMS

7.1. Administrative unit's planned utilization of existing human, physical and financial resources and any institutional commitment to supplement the resources

The M.A. in Music Education and Cognition will draw largely upon existing human, physical, and financial resources.

In terms of human resources, for teaching and administration we plan to use our existing team. Mounting the new core graduate courses will require financing to the equivalent of nine units per year. We anticipate the need for some administrative assistance on start-up in order to establish the correct protocols of the program in accordance with McMaster policies and procedures.

The physical resources will include teaching and research areas currently in use by the Music Area of SOTA; these facilities are essentially seminar rooms and labs. In addition, students and faculty in the program will utilize the new L.R. Wilson Hall, McMaster's new campus home for the Liberal Arts. This LEED certified building, funded by the province of Ontario, McMaster University, and L.R. Wilson, will include classrooms, research spaces and labs, practice and instruction facilities, including a percussion studio, performing arts facilities, including a 350-seat concert hall, public gathering and community spaces, and gardens. Construction began in June, 2013, and it is expected to open in 2016.

The program will be administered through the existing SOTA office in Togo Salmon Hall. Shared office space will be provided to students.

7.2. Participation of a sufficient number and quality of faculty who are competent to teach and/or supervise in the program

All of full-time faculty in the Music Area will be able to contribute to both instruction and supervision. All of these personnel have considerable teaching experience and most also have significant experience in graduate supervision. (Faculty profiles are found in Appendix 11.8; full CVs are provided in Appendix 11.9)

7.3. Evidence of adequate resources to sustain the quality of scholarship produced

All faculty on the team are highly productive scholars and researchers. All are operating under sufficient resources to maintain their research well into the future. We see no reason to doubt that the quality of our scholarship will in any way diminish through the establishment of the new program. On the contrary, we see it as a natural way forward, which will provide an exciting learning and research environment for the Music Area and for McMaster as a whole.

8. RESOURCES FOR GRADUATE PROGRAMS

8.1. Plan for adequate numbers of faculty and staff to achieve program's goals

The faculty complement indicated in Appendix 11.8 is sufficient to cover all the required courses in the M.A. in Music Education and Cognition. Indeed, all of the required courses can be taught by more than one full-time faculty member. This arrangement will also accommodate faculty research leaves or, should they occur, secondments to administrative positions.

The program requires nine units of new instruction per year. Under this scheme, recognizing that four of the five core courses will be on rotation, all of the core courses (MMEC 701-705) will be covered with the nine units of instruction.

As independent studies, MMEC 706-708 will be 'overload-courses' offered by Music faculty.

MMEC 709 and 710 will be self-funding, using course fees to cover the expenses of private instrumental instruction.

MMEC 711 will be overseen by the Program Director, but will have no instructional units assigned to it.

The instructional resources needed for the 600 level courses will be covered by the corresponding undergraduate courses.

Current staff will administer all aspects of the program, including administrative support for the Program Director.

8.2. Plan to provide necessary financial assistance for students

Students will normally be provided with at least one master's level TA-ship over the duration of the program. Scholarship funding will also be sought to support students. Students may also be eligible for OSAP funding. McMaster Bursary funding is also available to qualified students. Research Assistantships connected with the MAPLE and NOKIA labs may also be available, depending upon research needs and availability of funds.

8.3. Evidence that faculty research supervisors have ongoing funding, space and relevant research infrastructure to support students in program

Due to the primarily course-based nature of the program, additional funding, space and infrastructure is not needed to support the program. Nevertheless, it will be possible for students, particularly those electing MMEC 707 (Minor Project) or MMEC 708 (Major Project) to conduct research within our existing research laboratories, the MAPLE lab and the NOKIA lab. Faculty currently hold grants which support the funding of student research assistants in these labs. Most faculty are members of MIMM, and students will be encouraged to engage in the variety of events and activities, such as the NeuroMusic Conference and the MIMM Journal Club.

8.4. Supervisory and load distribution and qualification

In order to undertake MMEC 707 (Minor Project) or 708 (Major Project), students must secure the agreement of a faculty member. At this time any such supervisions will be on overload, and at the discretion of the faculty member. Our intention is that a minority of students will be permitted to undertake this option, thus minimizing the burden on faculty.

8.5. Evidence of prior experience in graduate teaching and research supervision for faculty

Amongst the faculty we have considerable experience at the graduate level. Dr. Renwick, as a faculty member of the earlier M.A. in Music Criticism at McMaster, besides being Director of the program, undertook graduate instruction and supervision at the M.A. level for 17 years. He has also served on several Ph.D. committees for Social Sciences at McMaster. Dr. Kinder has also served for many years as a member and supervisor in the earlier M.A. in Music Criticism. Drs. Woolhouse and Schutz currently supervise graduate students from across the campus in research and in thesis supervision. See Appendix 11.5, Table B.

9. QUALITY AND OTHER INDICATORS

9.1. Definition and use of indicators that provide evidence of quality of the faculty

The faculty involved in the program are expert researchers in the following fields:

- Music cognition;
- Music education;
- Brain mechanisms involved in listening to and engaging in music;
- Social factors involved in music learning and participation;
- The role of music in individual and community wellbeing;
- Advanced music theory and technology.

All full-time members of the Music Area currently active in teaching and research are included as members of the program's teaching faculty.⁷ All regular teaching faculty

⁷ It is anticipated that Dr. Kinder will retire before this program is established.

have Ph.D.'s.⁸ Of the seven faculty listed, five hold the rank of Assistant Professor (Drs. Mitchell and Schutz have been recommended for promotion to Associate Professor effective of July 1 2015), and two the rank of Full Professor. Drs. Kinder and Renwick have many years experience teaching at the graduate level in the earlier M.A. in Music Criticism. Teaching activity for the three years ending Winter 2014 is presented in Appendix 11.5, Table A.

9.2. Evidence of a program structure and faculty research that will ensure the intellectual quality of the student experience

The program is structured in order to provide students with (a) fundamental tools in music cognition and education (b) an in-depth experience that applies these tools in examining topics in music cognition and education, and (c) an opportunity for specialization in cognitive and educational applications, through the choice of electives. The elective courses will offer students the opportunity to augment their analytical skills and knowledge of core topics with specific knowledge in areas of education and cognition. This combination of strengths will give our students an outstanding educational experience.

The faculty are all outstanding researchers and educators. The faculty also have considerable involvement and interest in the musical community. (Refer to the CVs in Appendix 11.9.) The program and course content are designed to align faculty research interests and activities with student learning in the strongest possible manner, such that all of the required courses and most of the electives will be taught by active researchers whose scholarly activity is related to the course being offered. The Music area also encourages one-on-one interactions between faculty members and students, as we believe that these are an important contributor to a student's intellectual development. It is the close intertwining of teaching and research that is the strongest evidence that there will be a high degree of intellectual rigour and a dynamic student learning experience.

10. CONSULTATION PROCESS

10.1. Description of the consultation process undertaken during the development of the proposal.

The original idea for this program was declared about 2004, at the time that the McMaster Institute for Music and the Mind was established. At that time the Music Area agreed to terminate its existing M.A. in Music Criticism in order to channel its energy in this new direction.

Discussions with the faculty from the Department of Psychology continued, and this helped to establish our new hires in music cognition.

Discussions with faculty in the Cognitive Science of Language and the Dean of Humanities helped to move the process along.

The 2012 IQAP along with the Dean's response indicated a high degree of enthusiasm for the establishment of this program. Following the IQAP we set about collaboratively developing the proposed program.

⁸ David Gerry is currently in the final stages of a Ph.D. in Psychology at McMaster. As of July 1, 2014 David Gerry has reverted from full-time to sessional due to budget constraints.

In consultation with the Associate Dean of Research and Graduate Studies, Humanities, and staff of the School of Graduate Studies we developed a detailed proposal through the spring of 2014.

During the summer of 2014 the financial aspects were studied in accordance with the new budget model and the office of the Dean of Humanities determined that the program would be financially viable as proposed.

Consultations continued through the fall of 2014, in particular with staff of MIIETL, to develop a robust DLE and PLO strategy, while staff of McMaster Library provided a report on McMaster Library's resources and facilities in support of this program.

In December 2014, meetings were held with the Acting Dean of Graduate Studies, Associate Dean of Research and Graduate Studies, and Dean of Humanities in order to focus the program and ensure its alignment with faculty and university priorities.

In January 2015 the proposal was circulated widely through the university leadership in order to seek advice and approval.

11. APPENDICES

11.1. Course descriptions

MMEC 701 Music Cognition

The field of music cognition/psychology has grown rapidly since its origins in the mid-twentieth century, and now covers topics as diverse as the evolutionary origins of music, music perception, responses to music, performance, composition and improvisation, and the role of music in everyday life. Five principle topic areas will be addressed throughout the 12-week course: (1) *Evolution*—including universals in music processing, and social and personal functions of music from cross-cultural perspectives; (2) *Perception*—including the cognition of pitch, tonality, timbre, musical time and memory; (3) *Responses*—including physiological and emotional responses, expression, aesthetics and musical preferences; (4) *Brain*—including the neurobiological basis of the musical experience, brain plasticity, and music and language; (5) *Performance*—including measurement and models, sight-reading, performing from memory, gesture, and the physical and psychological health of musicians.

This material of this course—a detailed overview of some of the core trends within music cognition—will be delivered using a mixture of traditional lecture-based classes and student-led journal-paper analysis; thus the course's format will be a balance of instruction and seminar-type activities.

Each student will undertake to critically assess leading papers from the topic areas covered in the course. Students will be encouraged to examine the weaknesses and strengths within each field and to suggest ways in which the research they examine might be developed in the future.

Towards the end of the course students will form “idea-incubation clusters”, each consisting of 4-5 students. Each cluster will be required to present to the class and instructor (1) a specific, testable hypothesis relating to material studied in the course, and (2) the experimental method(s) by which could in theory be tested and assessed.

Assessment of students' progress and understanding of the course material will be based upon 5 short written assignments—to be completed following each of the principle topic areas, and a take-home final exam essay in which students may explore an aspect of the course that interests them in more detail.

The successful student will have a firm grasp of the principle areas of research within the field of music cognition, and be able to understand how this body of knowledge can be applied practically to real-world problems. In addition, successful students will be able to talk knowledgably about the field to laypersons, both individually and as part of a team.

MMEC 702 Research Methods in Music Cognition

The heart of any cognitively-based exploration of music is a firm understanding of the basic principles and approaches of experimental design and analysis. Through this course students will gain an overview of contemporary “best practices” for empirical study of musical issues. The course will review basic experimental design, and data analysis, visualization techniques through the lens of contemporary explorations done by top scholars in the field.

Through the course of this class, students will complete a final project that will demonstrate mastery of key concepts related to the empirical assessment of an interdisciplinary problem. To complete the project, students will identify an issue of broad importance to music cognition/education and exhibit fluency in the design of an empirical assessment of the issue.

A successful student will reach an evidenced-based conclusion of the issue at hand, with a recommendation for its implication to broader musical practice.

Evaluations will be based on an assessment of the final written project to ensure that it meets the rigorous standards of a master's level course project.

MMEC 703: Community Music and Well-being

This course will examine music from a number of perspectives to address music's place within the context of community. Studies abound demonstrating the profound impact that both choral singing and instrumental music can have on individuals and communities. Through analysis of current research, students will spend the first six weeks of the course investigating meanings of creating, performing and listening to music and identify processes that promote wellbeing across developmental stages, ages, cultures, social class, and musical interests. The research will be approached thematically according to three important aspects of music and well-being: 1) psychological factors, 2) physiological effects, and 3) social benefits, and will culminate in a literature review.

As an extension of the research into these three topic areas, students will spend the latter half of the course engaging in an experiential action research project with a community music ensemble or organization with the goal of understanding at a grassroots level the significant role that music plays in sustaining individuals and communities as well as the importance of this relationship to the nature of music-making that occurs. This final project could take on a number of formats, including a lecture-demonstration, concert, video, or written report.

MMEC 704: Musical Development and Education

A great deal of research has been published in the past few years in the field of musical development, changing the ways educators are able to study, define and debate the many issues surrounding the ways students engage with music. Musical behavior is complex and multi-faceted; it is a part of an infant's world from the very beginning, and is found in all of the world's cultures.

This course will provide a timely summary of current research in the field of musical development, thus allowing participants to be familiar with current concepts and literature and will identify many of the challenges educators face in trying to better understand the field. After completion of the course, students will be able to apply appropriate principals of music education and cognition, as well as contextualize their experience in the field of music education within the fields of psychology and cognition, to their research and teaching. Through research projects (independent and group), participants will be able to assess the validity of theoretical claims, visualize data and communicate their findings (oral and written) while engaging in ethical and well-designed projects. The material covered will consist of five modules:

- **Development:** A review of how the brain develops, ways of understanding musical development, and the nature of musicality.
- **Engagement:** Students will evaluate claims about the non-musical benefits of the exposure to music by examining the literature connecting musical training with cognitive development, literacy aesthetic response, perception of emotion, and social development.
- **Differences:** This module focuses on individual differences encountered during musical training, including motivation, giftedness and disability.
- **Skills:** Students will examine the development of vocal and instrumental ability, creativity and the use of technology to enhance learning.
- **Context:** A look at current global practice in the field of music education, including non-western musical traditions, will be an indispensable component of this course.

Evaluation: Students will demonstrate their understanding of the material through a variety of methods, including:

- Oral presentations (both in class as well as in community forums) to showcase their knowledge and understanding as well as to develop their communication skills
- The completion of an independent research project or paper connecting the fields of music cognition and music education.
- Formulate questions for future research and curriculum development.
- Formulate potential pedagogical applications, which could be undertaken in the classroom or studio.
- Be encouraged to present at a major conference (Ontario Music Educators' Association, McMaster Music and the Mind annual conference, etc.)

- Present a public talk on their research as part of the McMaster University “Music Education Outreach” series in the community.

After completing the course, students will possess a sound understanding of musical development and its relationship to education—whether it be in the classroom, private teaching, or working with ensembles—enabling them to plan music curricula, generate developmentally appropriate projects, and engage in effective pedagogical practice.

MMEC 705 Music Analysis

The objective of the course is to develop students’ abilities to engage in the discourse of musical structure and perception. It explores the formal properties of music and links them to notions of musical experience and culture. This course will normally be based around either a theoretical issue (such as current cognitive applications in music analysis) or around a musical genre (such as sonata forms in the early classical period).

Students will engage in group analysis of a selected set of shorter musical works in various styles. Background will be provided through instructor-selected readings from current periodicals and other literature. Through these means students will develop their and refine both their analytical skills and their ability to express their ideas clearly and forcefully.

Each student will undertake an independent analytical project stemming from the main theme of the course and contextualized through appropriate readings. Students will be expected to maintain frequent contact in order to keep up with the readings and to take an active part in the discussion. The student will develop an original interpretation or thesis and develop a coherent analytical perspective on the work. The student will report on his/her work in an oral presentation and in a written article. Each of these may be supplemented with musical examples (graphic and/or aural).

In addition students will collaborate in the production of an issue of the web-journal *McMaster Music Analysis Colloquium* (<http://www.humanities.mcmaster.ca/~mus701/macmac.htm>)⁹ through which process they will develop skills in organization, in peer-review, in logical discourse, and in creative presentation. Cooperative work is encouraged, as each student takes a role in the editorial team. As such they will be involved in the editorial process from peer-review through to editing and production.

The students will be evaluated on the basis of the shorter class assignments indicated above, on their principle research project, in both oral and written presentations, and on the quality of their contributions to the group-production of the on-line journal.

The successful student will be able to analyze a range of musical styles and genres to a high level of competence and contextualize his/her understanding in terms of musical experience and culture. The successful student will be able to communicate with considerable insight concerning the structural and expressive elements of musical composition. The successful student will be able to organize and present ideas, and to work cooperatively with others to a deadline.

⁹ This will be a continuation of the Journal originally begun in Music 701 of the earlier graduate program.

MMEC 706 Reading Course

The student will undertake an independent program of readings, established in conjunction with the faculty supervisor, focusing on a particular area of interest within the fields of Music Education and Cognition. The student will report on their reading in a series of engagements with the supervisor. The course will culminate in a paper which may take the form of a review-essay, an annotated and critical bibliography, or other approved summative work. Instructor permission required.

MMEC 707 Minor Project

Directed research under the supervision of a faculty member in the student's area of interest (requires approval of the supervisor).

The student will submit a written proposal for an independent research project in music education and/or cognition, including appropriate background reading and context, an explanation of method(s) to be employed, a description of the nature of the project, and an overview of possible outcomes and the significance of the work in the context of music education and cognition. The student must secure the agreement of a professor to act as supervisor for this course.

Once a proposal is approved by the supervisor, the student may begin the work. The details of the work, the specific methods of delivery, of demonstration of achievement and of evaluation are to be determined in each case on the basis of the approved written proposal.

MMEC 708 Major Project

Directed research under the supervision of a faculty member in the student's area of interest (requires approval of the supervisor).

The student will submit a written proposal for an independent research project in music education and/or cognition, including appropriate background reading and context, an explanation of method(s) to be employed, a description of the nature of the project, and an overview of possible outcomes and the significance of the work in the context of music education and cognition. The student must secure the agreement of a professor to act as supervisor for this course.

Once a proposal is approved by the supervisor, the student may begin the work. The details of the work, the specific methods of delivery, of demonstration of achievement and of evaluation are to be determined in each case on the basis of the approved written proposal.

MMEC 709 Instrumental Lessons (3 units)

Intensive study of the technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone, or guitar. The student will undertake a course of lessons at an advanced level, exploring a particular musical repertoire and/or techniques and that complement the objectives of the Program in Music Education and Cognition.

Topics will be determined by the student in consultation with the instructor and set forth in an initial abstract proposal. Sample topics are: piano-repertoire for intermediate to advanced adult performers with small hands; current methods for developing German diction; graded study materials for baroque instrumental performance. The student will also submit a short summary reflection on the material studied and its implications for performance, cognition, and/or education. Permission of the Graduate Program Committee required. NB: This course will be self-funding. Anti-requisite: MMEC 710.

MMEC 710 Instrumental Lessons (6 units)

Intensive study of the technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone, or guitar. The student will undertake a course of lessons at an advanced level, exploring a particular musical repertoire and/or techniques and that complement the objectives of the Program in Music Education and Cognition. Topics will be determined by the student in consultation with the instructor and set forth in an initial abstract proposal. Sample topics are: piano-repertoire for intermediate to advanced adult performers with small hands; current methods for developing German diction; graded study materials for baroque instrumental performance. The student will also submit a short summary reflection on the material studied and its implications for performance, cognition, and/or education. Permission of the Graduate Program Committee required. NB: This course will be self-funding. Anti-requisite: MMEC 709.

MMEC 711: Portfolio.

(no instruction, required course, no credit)

Students will undertake a self-guided portfolio preparation that documents the range and quality of their work in the program. Students will be guided in this process with the help of the university's extensive student-support programs, including the acclaimed Learning Portfolio Program, including workshops, individual consultations and web-conferencing.

The portfolio will be evaluated on a pass/fail basis in terms of demonstrating:

Initiative, personal responsibility, accountability.

Intellectual independence.

Effective written communication in a professional setting.

Independence, motivation and intellectual integrity.

The Portfolio allows students to collect in one place evidence of their curricular and co-curricular activities. The portfolio is intended to support the student's advancement into his/her further goals in the field.¹⁰

MMEC 6H03 Seminar in Tonal Analysis (c-1 with Music 4H03)

¹⁰ "McMaster University is committed to providing students with a learning experience that educates for capability and can guide students to meet and expand upon their individual learning goals. Capability, as described in *The Emerging Landscape*, extends beyond practical skills and knowledge to include continual growth as well as the ability to adapt, expand critical thinking, improve performance and generate new knowledge." The Student Learning Portfolio; M. Tompkins and D. Paquette D. Frenette, "Learning Portfolio Models in Health Regulatory Colleges of Ontario, Canada," *Journal of Continuing Education in the Health Professions*, 2010, 30, 57.

Advanced Studies in Analysis. Possible topics include: Schenkerian analysis, song cycles of Schubert, advanced set theory. Seminar (two hours); one term.

MMEC 6OC3: Choral Methods (c-1 with MUSIC 4N03)

Basic techniques of how to teach singing are presented as well as choral rehearsal techniques and choral literature for K-12 and community choirs. Two lectures, one lab; one term.

MMEC 6V03: Foundations of Music Education (c-1 with MUSIC 3V03)

A study of the philosophical, psychological and sociological foundations of music education, leading to the formation of a personal philosophy of music education. Seminar (two hours); one term.

MMEC 6Y03: Topics in Music History (c-1 with MUSIC 4Y03)

An intensive examination of a composer, period, genre, or issue from the style areas of “classical” music, film music, popular music, or jazz. Seminar (two hours); one term.

11.2. Schedule for the Program

The following list indicates the proposed scheduling for this program.

Fall term: MMEC 701, 703, 704, 705, 709.

Note: MMEC 701, 703, 704, and 705 are offered in alternate years, such that 701 and 703 alternate with 704 and 705.

Winter term: MMEC 702, 706, 709.

Fall and Winter term: MMEC 710

MMEC 707 and 708 are independent projects. Their scheduling is flexible.

MMEC 711 is a graduation requirement which occupies the length of the program.

MMEC 6H03, 6OC3, 6V03, and 6Y03 are offered in alternate years.

11.3. Costing and Budget Sheets (attached)

11.4. PLOGDL Teaching and Learning Outcomes Spreadsheet (attached)

11.5. Faculty teaching and supervision

Table A

Teaching – 2011-2014*			
Faculty Name and Rank	Undergraduate	Graduate	Area or Department
Professor			
Kinder, Keith	Music 3O03, 4OI3, 1GR3, 2GR3, 3GR3, 4GR3, 1GB3, 2GB3,		Music

	2GB3, 4GB3, 4V03, 4X03		
Renwick, William	Music 1CC3, 3CM3, 3CT3, 3H03, 4CO3, 4HO3, 4ZO3, 4ZZ3		Music
Assistant Professor			
Schutz, Michael NB: Dr. Schutz has been recommended for promotion to Associate Professor effective July 1, 2015.	Music 1GP3, 2GP3, 2MC3, 3GP3, 3P03 4GP3. 4J03, 4P03 MUSICCOG 2MA3 (PSYC 2MA3), 3B03 (PSYC 3MB3), 3QQ3, 4QQ3		Music
Woolhouse, Matthew	Music 1AA3, 2CC3, 2DO3, 2HO3, 4HO3		Music
Mitchell, Andrew	Music 1A03, 1B03, 1BB3, 2B03, 2BB3, 2F03, 3Y03, 3YY3, 4Y03,		Music
Gerry, David	Music 1A03, 1AA3, 1E06, 1GF3, 2A03, 2E06, 2GF3, 2T03, 2U03, 3AA3, 3E06, 3GR3, 3JO3, 3L03, 4E06, 4GF3, 4L03, 4Q03, 4V03		Music
Rensink-Hoff, Rachel	1D03, 1GC3, 1GW3, 2GC3, 2GW3, 3GC3, 3GW3, 3N03, 3O03 3V03, 4GC3, 4GW3, 4OC3, 4V03		Music

Table B

Thesis Supervision							
Faculty Name & Rank	Master's*		Doctoral		Post-Doctoral Fellows		Faculty Area
	In Progress	Completed	In Progress	Completed	In Progress	Completed	
Professor							
Kinder,		7					Music

Keith							
Renwick, William		4					Music
Assistant Professor							
Schutz, Michael	4	2	2	1			Music
Woolhouse, Matthew		2	2				Music
Mitchell, Andrew							Music
Gerry, David							Music
Rensink- Hoff, Rachel							Music

11.6. Research Facilities and Resources

McMaster is internationally known for its cutting-edge research in music and the mind. The majority of the faculty are members of McMaster Institute for Music and the Mind. The Music Area itself has two important research facilities, the MAPLE Lab and the NOKIA Lab. Several music faculty possess grant funding that can support graduate-student research and conference attendance.

MAPLE Lab

The Music, Acoustics, Perception & LEarning (MAPLE) Lab is a dynamic, interdisciplinary research facility housed in the School of the Arts. Affiliated with the McMaster Institute for Music and the Mind, the lab serves as a research hub for dozens of undergraduate students each year, as well as select graduate students from the Department of Psychology, Neuroscience, & Behaviour (PNB). Recently renovated through an infrastructure grant from the Canadian Foundation for Innovation, the lab contains two state of the art sound isolation booths as well as a variety of research-dedicated percussion instruments. Current research includes projects exploring the communication of emotion in music, how “moving to the beat” improves musical listening, and the role of body movements in shaping an audience’s perception of a musical performance. The lab is currently home base for a large scale software development project, creating the next generation of tools facilitating innovative interdisciplinary research questions. For more information, visit www.maplelab.net.

Digital Music Lab in Association with Nokia

The Digital Music Lab in Association with Nokia was founded in 2012 for the purpose of analyzing the Nokia Corporation’s global music download data from sociological, cultural and musicological perspectives. To fully explore the huge research potential of these data, students working in the lab receive in-depth training in database management (MySQL), statistics and related software applications. In addition, the lab also undertakes

dance-based research using motion capture and eye-tracking technology, and develops and empirically tests formal models of musical-pitch perception. A \$75,000 SSHRC Insight Development Grant, awarded to Dr. Matthew Woolhouse, the lab's director, currently supports much of the lab's research. For more information, visit www.digitalmusiclab.org.

McMaster Institute for Music and The Mind

The McMaster Institute for Music and the Mind is an interdisciplinary group of researchers including psychologists, neuroscientists, music theorists, musicians, mathematicians, kinesiologists, health scientists, and engineers. At the institute, scientists, researchers, and musicians study questions about the physical structure, evolution, neural processing, performance, and perception of music. Specific questions concern how the auditory and motor systems interact to produce music, how performers synchronize with each other, how people encode and recognize music, and how groups in society are defined by the music they play. Critically, the developmental neuroscience perspective informs the research community on how music induces emotional reactions, how musical experience and training affect brain development, and how musical training/exposure affects language, cognitive, and social abilities in both children and adults. This institute brings together science and the arts in a unique and innovative way, with the goal of enhancing the scientific study of music across Canada and internationally.

The LIVE Lab at MIMM

Funded by the Canada Foundation for Innovation, the Ontario Ministry of Research and Innovation, and McMaster University, the LIVE Lab supports cutting edge research through Multi-person EEG and Audience Physiology, Virtual Acoustics, Motion Capture, Video Wall, and Sound Recording.

11.7. Library and database resources (attached)

11.8. Faculty Professional biographies

David Gerry

David Gerry maintains a busy schedule as a teacher, researcher, performer and clinician. David is currently completing his PhD in Music Cognition at the School of Psychology, Neuroscience and Behaviour, McMaster University, where he works with Dr. Laurel Trainor. His doctoral research was funded in part from the Grammy Foundation in Los Angeles. He holds the M. Mus. and B. Mus. Perf. from the Faculty of Music, University of Toronto and an ARCT diploma from the Royal Conservatory of Music, which also awarded him the gold medal in flute. David is also a graduate of the Talent Education Institute in Japan, where he studied with Shinichi Suzuki and Toshio Takahashi. He is currently Assistant Professor of Music Education at the School of the Arts, McMaster University. David's research has been published in numerous publications, including *Developmental Science* and the *New York Annals of Science*. He has been a keynote speaker at numerous education conferences and recent appearances have included

lecturing, playing and teaching in New Zealand, Japan, and Alaska. David is also on the faculty of the Great Lakes Flute Centre. For many years he was the music specialist at Trail Ridge Montessori School in Grimsby, Ontario. He is a Registered Teacher Trainer for the Suzuki Association of the Americas and the European Suzuki Association. His students at McMaster have continued their education at many of North America's leading graduate programs, including those at Eastman, McGill, the University of British Columbia, the University of Buffalo and New York University.

Keith Kinder

Keith Kinder is currently Professor of Music and Director of the School of the Arts at McMaster University, where he conducts the McMaster Chamber Orchestra and the McMaster Concert Band, and is responsible for the Music education program. Prior to his appointment at McMaster, Dr. Kinder served on the faculty of the University of Prince Edward Island, and taught instrumental music in the schools of Nova Scotia. He holds degrees from the University of Western Ontario (B.Mus., Mus. Ed.), Northwestern University (M.Mus., Trombone Performance), and the University of Colorado (D.M.A., Instrumental Conducting).

An internationally recognized researcher on wind band music, Dr. Kinder appears regularly at conferences all over the world and publishes in international journals dedicated to his research interests.

He is the author of *Best Music for Chorus and Winds* (Manhattan Beach), *The Wind and Wind Chorus Music of Anton Bruckner* (Greenwood), *Prophetic Trumpets: Homage, Worship and Celebration in the Wind Band Music of Richard Wagner and Franz Liszt* (Pendragon), and *This Awareness of Beauty: the Orchestral and Wind Band Music of Healey Willan* (Wilfrid Laurier University Press).

Andrew Mitchell

Andrew Mitchell earned a B.Mus. degree in Piano Performance from the University of Saskatchewan and an M.A. and Ph.D. in Musicology from the University of Western Ontario. His graduate research focused on the medieval chant of the Franciscan order. He has delivered papers at International Congress of Medieval Studies, the Canadian Society of Medievalists and the Antiphonaria Study Group and has had research published in *Studia Musicologica Academiae Scientiarum Hungaricae* and by the *Institute of Medieval Music*. In 1997, he began work as a researcher for the SSHRC funded CANTUS Latin chant database, a project that was a pioneer in the field of digital musicology. Continuing in that position until 2009, Dr Mitchell trained and supervised the work of many graduate students. Since the completion of his doctorate in 2004, he has taught on various topics in the history of Western Music at UWO, the University of Waterloo, Lakehead University and McMaster University, where he was appointed as a Teaching Professor in 2010.

Rachel Rensink-Hoff

Rachel Rensink-Hoff is an Assistant Professor of Music at McMaster University where she directs the choral program and teaches courses in conducting, vocal-choral pedagogy

and music education. Prior to her appointment at McMaster, she taught at the University of Western Ontario where she completed both her Doctorate in Music and Masters in Choral Conducting. Rachel has also undertaken additional choral studies at the Eastman School of Music Summer Conducting Institute, the Voice Care Network of St. Johns University, Minnesota, and the University of Toronto. Her undergraduate degree in Vocal Music Education was completed at Calvin College, Michigan. Dr. Rensink-Hoff currently serves as President of Choirs Ontario and sits on the Advocacy Committee for the Association of Canadian Choral Communities. She serves frequently as adjudicator, conference presenter and workshop clinician and publishes regularly in *Anacrusis*, *Canadian Music Educator*, *Choral Journal* and *Dynamic*. Her dissertation, "Community Choral Singing: Balancing Factors of Leisure Participation and Musical Achievement" won the Outstanding Choral Dissertation award of the Association of Canadian Choral Conductors in 2010. Her current research interests lie in the areas of choral repertoire and programming, conducting pedagogy, and community outreach through choral singing.

William Renwick

William Renwick completed B. Mus, and M. Mus. degrees at the University of British Columbia, following which he took the M. Phil. and Ph.D. degrees in Music Theory at the City University of New York, where he specialized in Schenkerian studies under Carl Schachter, Joel Lester, and Charles Burkhart. He is Professor of Music Theory in the School of the Arts, McMaster University. His research interests encompass studies in tonal counterpoint and analysis and Gregorian chant as well as computer applications in music research. His publications include *Analyzing Fugue: A Schenkerian Approach* (Pendragon, 1995), *The Langloz Manuscript: Improvising Fugue from Thoroughbass* (Oxford, 2001), and *Chant: Old and New* (Institute of Medieval Music, 2012), as well as articles in *Journal of Music Theory*, *Music Theory Spectrum*, *Music Analysis*, *Bach Perspectives*, *Music Theory Online*, *Theoria*, *Computers in Music Research*, *Canadian University Music Review*, *Journal of Music Theory Pedagogy*, and other journals. He is currently engaged in publishing the first modern edition of the *The Sarum Rite* (sarumchant.ca). In 2002 he was a Fellow of the Mannes Institute for Advanced Studies in Music Theory. He is a founding member of the Gregorian Institute of Canada, and of the McMaster Institute of Music and the Mind. In 2013 he was Keynote speaker at the Gregorian Institute of Canada Conference in Vancouver. William Renwick is also an organist, composer, and choral director. He holds the Associate degree of the American Guild of Organists and the Fellow of the Royal Canadian College of Organists. He has performed concerts and recitals throughout the region. In 1999 he served as co-chair of The Canadian Organ Festival in Hamilton. He is Music Director at Saint Mary the Virgin Church in Hamilton Ontario, and director of the Hamilton Schola Cantorum.

Michael Schutz

Michael Schutz is Assistant Professor of Music Cognition/Percussion and a core member of the McMaster Institute for Music and the Mind. He is the founding director of the MAPLE Lab, researching Music, Acoustics, Perception, and LEarning. His research has attracted over \$1 million in funding from agencies such as the Canadian Foundation for

Innovation (CFI), National Sciences and Engineering Research Council (NSERC), National Institutes of Health (NIH) and the Ontario Early Researcher Award program. Schutz was Programming Chair for the 2013 meeting of the Society for Music Perception and Cognition (Toronto), and was from 2007-2013 the Chair of the Percussive Arts Society Music Technology Committee. His research has been featured on both television and radio broadcasts, receives regular attention in print media, and currently appears in at least five major textbooks including *Psychology of Music* (Psychology Press, 2010), *Cognitive Psychology* (Pearson, 3rd edition), and *The Psychology of Music in Multimedia* (Oxford University Press, 2013). A popular speaker, he has been invited to give keynote lectures numerous institutions, including Michigan State University, Western University of Ontario, Indiana University, and McGill University. Prior to his appointment at McMaster, he served as Director of Percussion Studies at Longwood University in Virginia, where he performed regularly with many ensembles including the Roanoke Symphony, Opera on the James, and the Oratorio Society of Virginia. His unique academic background includes bachelor's degrees in both Computer Science (BS) and Music Performance (BMA) from Penn State University, in addition to a MM in Music Performance from Northwestern University and a PhD in Experimental Psychology from the University of Virginia.

Matthew Woolhouse

Matthew Woolhouse holds a GGSM from the Guildhall Conservatoire of Music, and an MPhil and Ph.D from the University of Cambridge, UK. He is Assistant Professor of Music Cognition and Music Theory at McMaster, the founding Director of the Digital Music Lab in Association with Nokia, a core member of the McMaster Institute for Music and the Mind, and Associate member of the departments of Psychology, Neuroscience & Behaviour, and Communication Studies & Multi-Media. Woolhouse's research – featured in numerous television and radio broadcasts, and regularly within print media – explores music downloading, the pro-social effects of dance, and musical pitch perception. As a music professor he teaches courses in harmony, theory and advanced analysis. His work is published in a number of leading music journals, including *Music Theory Spectrum*, *Empirical Musicology Review*, *Journal of New Music Research*, and *Musicae Scientiae*. He is the recipient of numerous awards and grants, including a \$75,000 SSHRC Insight Development Grant in 2012, and as a co-principal investigator on a \$500,000 CFI-LOF Grant, awarded in 2012. Prior to his arrival at McMaster, Woolhouse was a Research Fellow in Cognitive Musicology at Wolfson College, University of Cambridge, UK.

11.9. Faculty full CVs (attached)

11.10. Endorsements (attached)