



474th REPORT OF THE ACADEMIC POLICY COMMITTEE TO SENATE

On the APC meeting held on May 12th 2016

I. TO BE APPROVED BY SENATE

(A) NEW TEACHING PROGRAMS REQUIRING SENATE APPROVAL

Faculty of Arts

Master of Public Policy; Non-Thesis (45 cr.) – Appendix A

At a meeting on May 12th 2016, APC reviewed and approved this new program, which will provide McGill the opportunity to train the next generation of national and global leaders. The program will be offered through the newly created School of Public Policy. It is designed for a discrete cohort of students who will take six core courses and participate together in an intensive policy lab with the goal of providing graduate-level education and training in public policy across a range of domains and contexts, while emphasizing collaborative learning and applied methods. Graduates will be prepared to contribute to the evidence and policy content needed to confront Canada's and the world's most complex policy questions.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve the proposed Master of Public Policy.

(B) ACADEMIC PERFORMANCE ISSUES / POLICIES / GOVERNANCE/AWARDS – none

(C) CREATION OF NEW UNITS / NAME CHANGES / REPORTING CHANGES

Research Advisory Council

McGill Centre for Islam and Science – Appendix B

At a meeting on May 12th 2016, APC reviewed and approved the creation of the McGill Centre for Islam and Science. The Centre represents a major initiative to deal with one of the most pressing issues of the first part of the 21st century, namely the role of rational scientific and philosophical discourse in Islamic societies, both past and present. A great deal of commentary, both scholarly and otherwise, has been put forth in the past decade regarding the role of Islam (both as a religion and as a civilization) in either promoting or hindering scientific development. Among the goals of the Centre is to deal with these and related issues through a tripartite structure consisting of interrelated research, teaching, and outreach components. The Centre will focus on science policy in Islamic countries, historical perspectives on the rational sciences in Islam and scientific literacy in Muslim societies. Already a provisional Centre, having permanent status would place it in a much better position to secure long-term funding.

APC therefore recommends that Senate approve the following resolution:

Be it resolved that Senate approve and recommend to the Board of Governors for approval the proposed McGill Centre for Islam and Science.

(D) CHANGES IN DEGREE DESIGNATION – none

(E) INTER-UNIVERSITY PARTNERSHIPS

(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**

A) ACADEMIC UNIT REVIEWS

Department of Food Science and Agricultural Chemistry

B) APPROVAL OF COURSES AND TEACHING PROGRAMS

1. Programs

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

i. New Programs

Faculty of Engineering

B.Eng.; Minor in Nanotechnology (21-22 credits)

Graduate and Postdoctoral Studies

M.Sc. in Epidemiology; Non-Thesis – Pharmacoepidemiology (48 cr.)

Ph.D. in Epidemiology; Pharmacoepidemiology (0 cr.)

M.Sc. in Experimental Surgery; Global Surgery (45 cr.)

M.B.A. in Management; Non-Thesis – Business Analytics (57 cr.)

Faculty of Arts

B.A.; Minor Concentration in Health Geography (18 cr.)

ii. Major Revisions of Existing Programs – *none*

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 7th April 2016 and 5th May 2016, reported to APC on 12th May 2016

Faculty of Engineering

B.Eng. in Mining Engineering Co-op (150-151 cr.)

Graduate and Postdoctoral Studies/Faculty of Engineering

M.Eng. in Electrical Engineering; Non-Thesis

Faculty of Medicine

B.Sc.(Rehab.Sc.); Major in Occupational Therapy (90 cr.)

B.N. (Integrated Nursing) (67 cr.)

B.Sc. (N.) (139 cr.)

ii. Program Retirements – *none*

2. Courses

a) New Courses

Reported as having been approved by SCTP on 7th April 2016 and 5th May 2016: 45

School of Continuing Studies: 2

Faculty of Education: 22 *Pending Senate/Ministry approval of program*

Faculty of Engineering: 1

Faculty of Management: 6

Faculty of Medicine: 14

b) Course Revisions

Reported as having been approved by SCTP on 7th April 2016 and 5th May 2016: 46

Faculty of Education: 1

Faculty of Engineering: 9

Faculty of Medicine: 35

Faculty of Science: 1

c) Course Retirements

Reported as having been approved by SCTP on 7th April 2016 and 5th May 2016: 3

Faculty of Medicine: 3

(B) OTHER



McGill

New Program/Major or Minor/Concentration Proposal Form

(2013)

<p>1.0 Degree Title Please specify the two degrees for concurrent degree programs</p> <p>Master of Public Policy (MPP)</p>	<p>2.0 Administering Faculty/Unit</p> <p>Graduate and Postdoctoral Studies</p>
<p>1.1 Major (Legacy= Subject)(30-char. max.)</p>	<p>Offering Faculty/Department</p> <p>Arts/School of Public Policy</p>
<p>1.2 Concentration (Legacy = Concentration/Option) If applicable to Majors only (30 char. max.)</p> <p>Non-Thesis</p>	<p>3.0 Effective Term of Implementation (Ex. Sept. 2004 = 200409) Term</p> <p>201809</p>
<p>1.3 Minor (with Concentration, if Applicable) (30 char. max.)</p>	

4.0 Rationale and Admission Requirements for New Proposal

No Canadian university east of Toronto offers a Master of Public Policy yet interest in and need for sophisticated policy training is increasing. The MPP is an opportunity for McGill to train the next generation of national and global leaders. The program will be offered in the School of Public Policy. Graduates will be prepared to contribute to the evidence and policy content needed to confront Canada's and the world's most complex problems, and to an ongoing interactions. Admissions requirements: Bachelor's degree plus one course each in political science, macroeconomics, and quantitative methods or stats.

5.0 Program Information
Please check appropriate box(es)

<p>5.1 Program Type</p> <p><input type="checkbox"/> Bachelor's Program</p> <p><input checked="" type="checkbox"/> Master's</p> <p><input type="checkbox"/> M.Sc. (Applied) Program</p> <p><input type="checkbox"/> Dual Degree/Concurrent Program</p> <p><input type="checkbox"/> Certificate</p> <p><input type="checkbox"/> Diploma</p> <p><input type="checkbox"/> Graduate Certificate</p> <p><input type="checkbox"/> Graduate Diploma</p> <p><input type="checkbox"/> Ph.D. Program</p> <p><input type="checkbox"/> Doctorate Program (Other than Ph.D.)</p> <p><input type="checkbox"/> Private Program</p> <p><input type="checkbox"/> Off-Campus Program</p> <p><input type="checkbox"/> Distance Education Program (By Correspondence)</p> <p><input type="checkbox"/> Other (Please specify)</p>	<p>5.2 Category</p> <p><input type="checkbox"/> Faculty Program (FP)</p> <p><input type="checkbox"/> Major</p> <p><input type="checkbox"/> Joint Major</p> <p><input type="checkbox"/> Major Concentration (CON)</p> <p><input type="checkbox"/> Minor</p> <p><input type="checkbox"/> Minor Concentration (CON)</p> <p><input type="checkbox"/> Honours (HON)</p> <p><input type="checkbox"/> Joint Honours Component (HC)</p> <p><input type="checkbox"/> Internship/Co-op</p> <p><input type="checkbox"/> Thesis (T)</p> <p><input checked="" type="checkbox"/> Non-Thesis (N)</p> <p><input type="checkbox"/> Other Please specify</p>	<p>5.3 Level</p> <p><input type="checkbox"/> Undergraduate</p> <p><input type="checkbox"/> Dentistry/Law/Medicine</p> <p><input type="checkbox"/> Continuing Ed (Non-Credit)</p> <p><input type="checkbox"/> Collegial</p> <p><input checked="" type="checkbox"/> Masters & Grad Dips & Certs</p> <p><input type="checkbox"/> Doctorate</p> <p><input type="checkbox"/> Post-Graduate Medicine/Dentistry</p> <p><input type="checkbox"/> Graduate Qualifying</p> <p><input type="checkbox"/> Postdoctoral Fellows</p> <p>5.4 FQRSC (Research) Indicator (for GPS) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
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<p>6.0 Total Credits</p> <p>45</p>	<p>7.0 Consultation with Related Units Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Financial Consult Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Attach list of consultations.</p>
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8.0 Program Description (Maximum 150 words)

The non-thesis, course-based MPP is designed for a discrete cohort of students who will take six core courses together and participate together in an intensive policy lab in the month of May with the goal of providing graduate-level education and training in public policy across a range of domains and contexts while emphasizing collaborative learning and applied methods. At the same time, the curriculum is designed to provide thorough grounding in the intellectual legacies and academic disciplines that inform and reflect the broad field of public policy. Required courses will be supplemented by complementary courses which will allow students to pursue more specific interests in key policy areas. The summer internship will provide an opportunity for off-campus 'real-world' application of the knowledge and skills developed on-campus while requiring intellectual reflection on that experience through a capstone project focusing on assessment of a particular problem addressed during the internship experience.

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

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

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

Master of Public Policy; Non-Thesis (45 credits)

Required Courses (33 credits)

PPOL 601 Public Policy Theory and Analysis (3 credits)
 PPOL 602 Economics for Public Policy (3 credits)
 PPOL 603 Political Landscape of Public Policy (3 credits)
 PPOL 604 Ethics, Law and Public Policy (3 credits)
 PPOL 605 Statistics for Public Policy (3 credits)
 PPOL 606 Science, Evidence and Evaluation (3 credits)
 PPOL 615 Policy Analysis Lab (6 credits)
 PPOL 616 Public Policy Internship (9 credits)

Complementary Courses (12 credits)

12 credits from the following:

PPOL 607 Health and Social Policy (3 credits)
 PPOL 608 International Development and Global Affairs (3 credits)
 PPOL 609 Public Service Delivery in Canada (3 credits)
 PPOL 610 Environment and Public Policy (3 credits)
 PPOL 611 Business and Public Policy (3 credits)
 PPOL 612 Indigenous Issues in Public Policy (3 credits)
 PPOL 613 Media, Information and Public Policy (3 credits)
 PPOL 614 Topics in Public Policy (3 credits)

10.0 Approvals			
Routing Sequence	Name	Signature	Date
Department	Antonia Maioni	<i>Antonia Maioni</i>	
Curric/ Acad Committee	Susan Sharpe	<i>Susan Sharpe</i>	DEC 14 2015
Faculty 1	Susan Sharpe	<i>Susan Sharpe</i>	JAN 26 2016
Faculty 2			
Faculty 3			
CGPS	SCTP	CGPS APPROVAL	MAR. 14, 2016
SCTP	APPROVED		Apr. 7, 2016
APC		APC APPROVED	May 12, 2016
Senate			

Submitted by		To be completed by ARR:	
Name	Prof. Antonia Maioni		
Phone		CIP Code	
Email	Antonia.Maioni@mcgill.ca		
Submission Date	27 October 2015		

Background Report for Master of Public Policy in the School of Public Policy

This report provides a context for the proposed Master of Public Policy (MPP) program. The plan is to situate and deliver this program in the the proposed School of Public Policy, Faculty of Arts. Consideration of this proposed program requires knowledge of the historical background and the institutional and financial circumstances within which this proposal emerges. We trust that the the following will provide this background.

Rationale for a MPP: Developing capacity in public policy has been a University priority for at least ten years and is most recently confirmed as a priority in the Strategic Research Plan, 2013- 2017, prepared in the Office of the Vice-Principal (Research and International Relations). A proposal to create a School of Public Policy was successfully presented to an external donor in the summer of 2015. Securing external financial support was a key condition on moving forward with plans for the program and School.

A number of public policy programs have emerged in Canada over the last 10-15 years. However, there is no School of Public Policy or Master of Public Policy program east of Ontario¹, and none that can leverage McGill's particular combination of talent, reputation, and location.

McGill is already a respected venue for exchange and debate on public policy issues, and is one of the few institutions in Canada able to do so in the context of a truly national and international conversation that can link evidence, expertise, and policy-making. McGill is uniquely positioned to be the bridge between pan-Canadian and global expertise and exchange on the most pressing issues of the day.

There is depth and breadth of expertise in the Faculty and University in core areas related to public policy. There is also interest in public policy across disciplines in which McGill's reputation are already evident (e.g., social sciences, humanities, law, urban planning, science, environment, education, global development, medicine, etc.). The School of Public Policy will provide an anchor for public policy at McGill and it will be located in the Faculty of Arts.

While there are many faculty members actively engaged in policy-relevant research, McGill lacks a fully-developed curriculum in policy practice, analysis and content. The Master in Public Policy will provide that curriculum in an intensive, multi-disciplinary program leading to a professional rather than research degree.

It is not expected to compete with existing Master of Arts programs such as in political science, economics, or other graduate offerings within the Faculty of Arts. As noted, it will not offer a research degree. While course offerings in the MPP obviously will draw on a range of disciplines and departments/institutes, its focus is on the translation and application of that disciplinary knowledge in the practice and analysis of public policy.

¹ There is a maîtrise en administration publique at the Université de Moncton and a School of Public Administration at Dalhousie University, as well as École nationale d'administration (ENA, Montréal).

This report summarizes key features of the plans for the School and the MPP, and the implications for the Faculty. It draws on a detailed feasibility study prepared by Professor Antonia Maioni that was presented to the Provost in March 2015. It draws as well on a business plan for the School prepared by the Provost's Office in Fall, 2015.

A proposal for the School of Public Policy will be presented to the appropriate University governing bodies over the course of the 2015-16 academic year with the objective of establishing the School formally in 2017. The proposed new Master degree in Public Policy [MPP] will be the core program of the School of Public Policy in the Faculty of Arts

Structure of the MPP Program: The MPP will be a focused, 12-month, 45-credit non-research degree program intended for recent graduates or early-career professionals interested in developing expertise in the field of public policy. Prerequisites to admission to this program include a bachelor's degree. Students must have completed one political science course, one macroeconomics course, and one quantitative methods or statistics course at the undergraduate level either within or outside of their bachelor's degree.

The program will have an annual enrolment target of 25 students. A cohort of this size will facilitate classroom learning, enable good contact with teaching faculty, and ensure that the program is able to attract and select the very best applicants.

In each of the Fall and Winter terms of the program, students will take 3 required courses and 2 complementary courses (30 credits total). The required courses will cover foundational theories and methodologies of public policy in various contexts; complementary courses will address policy issues and practices in a range of applied domains.

The month of May after that will be devoted to an intensive, 6-credit, module-based public policy lab where students will be engaged in a hands-on workshop to learn the building blocks of project organization and team management and to deploy these tools in analyzing actual policy questions with input and mentoring from policy actors in the public and private sector.

Lastly, students will complete a 9-credit internship during the summer months that will place them in a public, private, or non-profit organization, where they can apply the skillsets and tools developed in their program. Requirements include a policy analysis and report (problem definition, formulation of solutions, evidence and methods, policy recommendations) relevant to the internship placement environment. The cohort is then expected to return to campus for a final week in August to compare and exchange their experiences and best practices.

The required courses in Fall and Winter, the lab, and the internship will be open exclusively to students enrolled in the MPP program. Complementary courses, however, will be open to any McGill student with the appropriate background, and enrolment of non-MPP students will be encouraged.

MPP Specific Learning outcomes:

a) Students will acquire a broad range of analytic and methodological skills that will allow them to develop the transversal competencies necessary to understanding the complexity of public policy across the public, private and not-for-profit sectors, and developing innovative solutions

to policy problems.

b) Students will be given the opportunity to develop expertise in substantive policy fields (including global development, environment, health care, science and innovation, and indigenous studies).

c) Students will be able to develop leadership skills and teamwork experience necessary to contribute to their future as agents of change in policy innovation and implementation.

Type of Professionals:

The MPP is directed at recent graduates or early-career professionals interested in developing expertise in the rapidly developing field of public policy. Typically, graduates will be able to contribute to public service through pursuing careers in federal, provincial, and municipal governments or parapublic agencies, as well as international agencies and organizations. Their skill-sets will also be sought out in public relations, public affairs, and strategic consulting, as well as in private sector companies and not-for-profit organizations. They will also be engaging in service to the public by developing their own forms of entrepreneurship and innovation to address future challenges.

Curriculum and the Master of Public Policy

Required Courses 33 CREDITS

PPOL 601 Public policy theory and analysis (3 credits) PPOL 602 Economics for public policy (3 credits)

PPOL 603 Political landscape of public policy (3 credits) PPOL 604 Ethics, law and public policy (3 credits) PPOL 605 Statistics for public policy (3 credits)

PPOL 606 Science, evidence and evaluation (3 credits)

PPOL 615 Policy analysis lab (6 credits) PPOL 616 Public policy internship (9 credits)

Complementary Courses 12 CREDITS

PPOL 607 Health and social policy (3 credits)

PPOL 608 International development and global affairs (3 credits)

PPOL 609 Public service delivery in Canada and the provinces (3 credits)

PPOL 610 Environment and public policy (3 credits)

PPOL 611 Business and public policy (3 credits)

PPOL 612 Indigenous issues in public policy (3 credits)

PPOL 613 Media, information and public policy (3 credits)

PPOL 614 Topics in Public Policy (3 credits)

School of Public Policy. The School will be staffed by a Director who will report to the Dean of Arts and, initially, by three new faculty members to be appointed wholly to the School, or jointly with other units appropriate to their areas of expertise. Other hires of tenure track faculty will be made as the School develops. It is expected that the first Director will be chosen through a national search and will be appointed to a tenured position at McGill.

Faculty from other units in Arts, who may teach courses in the School from time to time, will complement the core faculty in the School. When members of other units, not appointed to the School, either wholly or jointly, do teach in the MPP, their home units will be financially compensated. The financial arrangements are still to be finalized, but course buyouts of this kind are expected to be in the range of \$10,000 -\$15,000.

Please note that these buyouts apply to dedicated public policy courses in the School, where teaching in one of these courses implies teaching one less course in the home unit. Buyouts should not apply to courses that are cross-listed between the School and another unit. Courses like this might be developed for some of the complementary courses in the School (more below on the MPP courses).

The School will also administer a research program to which members of the Faculty of Arts with research interests that fit the mandate of the School can apply. In these ways, the School will develop linkages with other units in Arts. This is an important consideration. The School should be an integrated part of the Faculty.

As the School develops, other contract academic staff and professors of practice, whose professional experience will complement the core faculty's academic expertise, will join academic staff in the School of Public Policy. Professors of practice will contribute to the MPP teaching program and will help facilitate the development of research and exchange networks that connect academics with policy practitioners.

Financing. McGill University has secured philanthropic support for the School of Public Policy that will cover a significant portion of the cost of implementation and management of the School and degree program. The Max Bell Foundation will provide \$7.5 million over 10 years to support the new School. The agreement with the Foundation is also renewable after the first 10 years. This is not an endowment. The commitment is to direct fund the School, \$750,000 per year for 10 years, renewable. In addition, the Foundation will allow the University to use other Max Bell donations to McGill to support the School. The Provost's Office has identified that the total level of support from the Max Bell Foundation at just under \$10 million for the next 10 years. The School will continue to engage in fundraising from other sources.

The University will grant hiring licenses and allocate the budget required to make the core tenure-track hires to staff the program. These licenses will not be drawn from the academic complement of the Faculty of Arts. They will be new hires. It also is expected that some of these positions will be joint appointments between the School and other units in the University, including Arts.

While not an initial priority, the University will also support the development of revenue-generating executive-education programs which will further extend the School's pedagogic

reach and bring revenue to the School to support its core mission. Philanthropic support, University commitment to faculty hiring, and revenue-generating programs, combined with an enrolment- driven budget allocation will contribute to the financial sustainability and administrative structure of the School and degree program.

Administrative Structure. In addition to the core and contract faculty appointments, the School will be staffed by a non-academic associate director and other staff who will support the internship program, outreach and research. The business model for the School funds these positions through the commitment of the Max Bell Foundation, allocations from the Provost's Office via enrollment- driven allocations and, in the medium term, revenues produced by executive programs.

Consultation and Best Practices. As noted at the outset, Professor Antonia Maioni was tasked by the Office of the Provost to conduct a feasibility study in preparation for the creation of the School of Public Policy. Professor Maioni visited major public policy schools, institutes and programs in Canada and the United States as well as several programs in the United Kingdom. The current plan builds on this study, which provided the basis by which to create a School of Public Policy that would effectively position McGill within Canada and North America, in particular.

Consultations for the feasibility study (a list of experts consulted, presentation of public policy programs in other institutions) is provided in a separate attachment.

Physical location of the School The plan, initially, is to rent downtown office space for the School. The rental costs are built into the business plan for the School. It is expected to be moved to a more permanent location when suitable space becomes available.

Conclusion: This proposal is timely insofar as the demand for such a program converges with the strengths of our current faculty complement as well as resources that have been mobilized to make this happen. This is clearly an opportunity for the Faculty of Arts as the feasibility study suggests that there are ample applicants and demand for such a program and external financial support has been guaranteed. Given the scholars we have in the policy area, the hires that are planned in the School of Public Policy, and significant injection of funds provided by the Max Bell Foundation (~\$1M/year), the School will be self-financed with its revenues supporting its administrative structure and delivery of its academic mission. It does not represent an additional load to the Faculty's administrative or clerical support. The School will strengthen how the Faculty of Arts is perceived and experienced, both within and outside of McGill.. The Dean's Office is committed to ensuring that the Faculty's Departments, Institutes and Schools will be meaningfully engaged with the creation, program development and research components of the School.

McGill Centre for Islam and Science

Proposal for a Permanent Research Centre



September 28, 2015

Revised: November 2015, April 2016

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I. Identification

Name: McGill Centre for Islam and Science (MCIS)
Proposers: Prof. Ehab Abouheif, Department of Biology
Prof. Anila Asghar, Department of Integrated Studies in Education
Prof. F. Jamil Ragep, Institute of Islamic Studies
Proposed Director: F. Jamil Ragep
Lead Faculty: Faculty of Arts
Other Faculties involved: Faculty of Science and Faculty of Education
Location: Morrice Hall, Room 025
3485 McTavish Street
Montreal, Quebec H3A 0E1
www.islam-and-science.org
islam.science@mcgill.ca

II. Rationale

a. Context and background for creating a research centre

The McGill Centre for Islam and Science represents a major initiative to deal with one of the most pressing issues of the first part of the 21st century, namely the role of rational scientific and philosophical discourse in Islamic societies, both past and present. A great deal of commentary, both scholarly and otherwise, has been put forth in the past decade regarding the role of Islam (both as a religion and as a civilization) in either promoting or hindering scientific development. Most of this has been based upon long discredited opinion, for example that science in Islam virtually came to a halt after the eleventh century. Such claims have had serious policy implications; if Islamic societies long ago turned their backs on science and modernity, one conclusion has been that they are incapable of reforming themselves and thus external forces will be needed to impose change. Negative views of the Islamic scientific heritage have also tended to make modern Muslim scientists and students feel disadvantaged, especially when they try to reconcile their faith with modern, “western” science.

Among the goals of the Centre is to deal with these and related issues through a tripartite structure consisting of interrelated research, teaching, and outreach components. These are:

- 1) Science Policy in Islamic countries: instituting pathways to innovation
- 2) The Rational Sciences in Islam: historical perspectives
- 3) Scientific Literacy in Muslim Societies

Already as a provisional centre, MCIS has been able to support a number of activities that are listed below, and we have been successful in obtaining funds, both from international sources and from a SSHRC Partnership Development Grant. We have also approached a number of foundations and governments for additional support; from these conversations, it is clear that having permanent status would place us in a much better position to secure long-term funding.

b. Overall purpose of the research centre:

The MCIS's mission is to explore the interactions of science and religion in Islamic societies, both past and present, and to advance policy and educational proposals based on that exploration.

c. History

During its period as a provisional Centre, the three co-founders (Prof. Ehab Abouheif, Prof. Anila Asghar, and Prof. Jamil Ragep) have worked together on a number of projects and initiatives. They have also worked individually on research and outreach that are within the overall mission of the MCIS. These include:

▪ **MCIS Accomplishments February 2013 – April 2016**

1. Invited lecture: "Science and Religion in Islam: Conflict or Creative Engagement?" by Jamil Ragep at the Aga Khan Museum, Toronto, 20 April 2016
<https://www.agakhanmuseum.org/learn/event/science-and-religion-islam-conflict-or-creative-engagement>
2. Workshop: "Working with ISMI: Scholars Take Stock of a New Tool," 29 Feb.-1 March 2016, Berlin [11 participants; organized in conjunction with the Max Planck Institute for the History of Science, Berlin as part of a SSHRC Partnership Development Grant]
3. Workshop: "Science Teaching in Contemporary Islamic Societies", McGill University, Oct. 22-24, 2015 [14 participants; part of a SSHRC Partnership Development Grant]
4. Invited Presentation: Prof. Ehab Abouheif, "Modern Theory of the Origin of Species and a Review of Factual Evidence for Evolution," 6 Sept. 2015 at the annual meeting of the Islamic Society of North America (ISNA), Chicago, with sponsorship by Association of Muslim Scientists, Engineers and Technology Professionals (AMSET)
<http://www.isna.net/amset-conference.html>
5. MCIS lecture: "Islamic Creationism in Europe: Biological Evolution in Service of the 'Clash of Civilizations' Narrative", by Prof. Salman Hameed (Hampshire College), 27 March 2015 at McGill, sponsored by MCIS <https://www.mcgill.ca/islamicstudies/news-events/past-events/2014-2015#Hameed>
6. Invited lecture: "Continuity, Contiguity, Contingency: Islam and Copernicus Reconsidered", the Richmond Lecture, by Prof. Jamil Ragep at Williams College, 14 April 2015 http://communications.williams.edu/news-releases/4_14_2015_ragep/
7. Invited lecture: "Religion as Agency in the History of Islamic Science", by MCIS member Prof. Jamil Ragep at Bowdoin College (Maine), 27 February 2015

<http://community.bowdoin.edu/news/2015/03/scholars-explore-science-before-the-scientific-revolution/>

8. Online course: “An Introduction to Evolution for Muslims by Muslims”, organized jointly by the Deen Institute and MCIS and taught by MCIS members Dr. Matteen Rafiqi and Prof. Ehab Abouheif, January 2015. For more detail: <http://thedeeninstitute.com/courses/science/124-evolution-for-muslims.html>
9. Workshop: “Special Aspects of Teaching Science to Different Cultural Audiences”, with MCIS members Prof. Anila Asghar, Prof. Ehab Abouheif, and Dr Abdul Matteen Rafiqi, Redpath Museum, December 2014
10. MCIS lecture: “Islam and Evolution: Can Science and Religion Coexist Harmoniously?” by Dr. Rana Dajani (Hashemite University, Jordan), 22 September 2014 at McGill, sponsored by MCIS. For more detail: <http://www.mcgilldaily.com/2014/10/islam-and-evolution/>
11. Independent reading group: “Islam, Science, and Education: Past Perspectives, Present Dilemmas, and Future Prospects”, at the McGill Institute for the Public Life of Arts and Ideas (IPLAI), organized by MCIS (Prof. Anila Ashgar and Prof. Ehab Abouheif), Winter 2014). For more detail: <http://www.mcgill.ca/iplai/reading-groups/winter-2014/islam-science-and-education>
12. Invited lecture: “ ‘Seek Knowledge Even as Far as China’: The Quest for Islamic Science”, by Prof. Jamil Ragep, an event sponsored by the Ismaili community on the occasion of the Prophet’s birthday, February 2013
13. Public debate: “Have Muslims Misunderstood Evolution?”, by MCIS member Prof. Ehab Abouheif at the Deen Institute’s “Dialogue with Islam” event, January 2013
14. Invited panel member Prof. Ehab Abouheif on “Reconciling the Islamic Tradition with the Theory of Evolution”, part of “Science & Islam” event, organized by the American Islamic Congress, sponsored by Project Nur, and supported by the John Templeton Foundation, October 2012 (details here: <http://www.aicongress.org/event-2/>, <http://www.forbes.com/sites/johnfarrell/2012/10/24/tonight-in-boston-grappling-with-evolution-and-islam/>, <http://www.forbes.com/sites/johnfarrell/2012/11/30/god-and-evolution-easier-for-muslims-than-christians/>)
15. MCIS web site: www.islam-and-science.org.

▪ **Cooperation and collaboration with scholars at other universities, institutions and/or industry partners or community-groups**

- 1) Deen Institute, London, UK: see above for details of online course, 5-19 January 2015
- 2) The American University of Sharjah (UAE) and the Université Interdisciplinaire de Paris (France); Prof. Ehab Abouheif took part in the *Islam & Science Summer School* from 22-31 August 2014 in Paris, France
- 3) Prof. Salman Hameed, Associate Professor of Integrated Science and Humanities and Director of the Center for the Study of Science in Muslim Societies (SSiMS), Hampshire College; ongoing research and collaboration with Prof. Anila Asghar
- 4) Max Planck Institute for the History of Science (Berlin); ongoing collaboration with Prof. Jamil Ragep on the Islamic Scientific Manuscripts Initiative (ISMI), a major research component of MCIS, and the “Science Teaching in Pre-modern and Modern Islamic Societies” project

- 5) University of California (Berkeley), represented by Prof. Asad Ahmed: contributing partner for “Science Teaching in Pre-modern and Modern Islamic Societies” project
- 6) Medeniyet University (Istanbul), represented by Dean of Arts Ihsan Fazlioglu: contributing partner for “Science Teaching in Pre-modern and Modern Islamic Societies” project
- 7) The following are individual participants in the “Science Teaching in Pre-modern and Modern Islamic Societies” project:
 - a. A. Ahmed (University of California, Berkeley, US)
 - b. S. Argun (Istanbul University, Turkey)
 - c. S. BouJaoude (Director, Center for Teaching and Learning & Science and Math Education, American University of Beirut, Lebanon)
 - d. R. Dajani (Hashemite University, Jordan)
 - e. A. Djebbar (Prof. Emeritus, Université de Lille I, France and former Minister of Higher Education and Scientific Research in Algeria from 1992-1994)
 - f. N. Fancy (DePauw University, US)
 - g. I. Fazlioglu (Dean, Faculty of Letters, Medeniyet Univ., Istanbul, Turkey)
 - h. S. Hameed (Director, Center for the Study of Science in Muslim Societies, Hampshire College, US)
 - i. T. Mimura (University of Manchester, UK)
 - j. R. Morrison (Bowdoin College, US)
 - k. J. Murphy (Colorado College, US)
 - l. J. Pfeiffer (Oxford University, UK)
 - m. K. Plofker (Union College, US)
 - n. J. Quadri (University of Illinois, Chicago, US)
 - o. S. Ragep (McGill)
 - p. M. Rius-Piniés (University of Barcelona, Spain)
 - q. M. Shank (University of Wisconsin, US)
 - r. F. Speziale (Université Sorbonne Nouvelle –Paris 3, France)
 - s. F. Wallis (McGill)
 - t. D. Wintergruen (Max Planck Inst. for the Hist. of Science, Berlin, Germany)

d. Recommendations: List of attached letters of support

- Prof. Rana Dajani, Department of Biology and Biotechnology, Hashemite University, Zarqa, Jordan
- Prof. Dr. Lorraine Daston, Managing Director, Max-Planck-Institute for the History of Science
- Prof. Martin Grant, Dean, Faculty of Science, McGill University
- Prof. Nidhal Guessoum, Department of Physics and Astronomy, American University of Sharjah, United Arab Emirates
- Prof. Salman Hameed, Director, Center for the Study of Science in Muslim Societies, Hampshire College, Massachusetts
- Prof. Hudson Meadwell, Interim Dean, Faculty of Arts, McGill University
- Prof. Robert Morrison, Professor of Religion, Bowdoin College, Maine
- Prof. Dilson Rassier, Dean, Faculty of Education, McGill University

e. Summary of the rationale and justification for a centre

- 1) The Centre will be unique to the field, as it would be the first such Centre among international peers, creating a strategic advantage by offering a platform for complex collaborations internationally.
- 2) A Centre will allow us to achieve greater recognition and credibility than would be possible as an informal research group or partnership. We believe this has already been demonstrated by our success in obtaining a SSHRC partnership development grant in which we emphasized the importance of our provisional Centre for achieving our multidisciplinary goals.
- 3) A Centre will also allow us to become a nexus for international cooperation inasmuch as we act as an institution and not merely as a collection of individuals. Many of the leading global figures dealing with Islam and Science have enthusiastically offered their support as indicated by the supporting letters attached to our proposal.
- 4) Without a Centre, it would certainly be more difficult to bring our colleagues (local, Canadian, and international) together to undertake the projects we are currently pursuing and that we project doing in the future. An *interdisciplinary* Centre makes it easier to engage historians, educators, scientists, and policy makers, groups who do not usually have the opportunity to interact.
- 5) A Centre will also allow us to engage students, post-docs, scholars, and potential partners who would be attracted to a firmly established centre.
- 6) To reiterate the point made above, having the status of a permanent centre will certainly facilitate fundraising.

III. Research program

As a research centre, MCIS will sponsor lectures, workshops, and reading groups, will promote interaction between graduate students and postdocs in different faculties (specifically Arts, Science, and Education), and will engage various constituencies and communities in Montreal and Quebec in our activities. Furthermore, the MCIS has inspired two research initiatives, which were not previously possible as individual research projects. We are committed to a major, 3-year project “Science Teaching in Pre-modern and Modern Islamic Societies” (aligned with components 2 and 3 of the centre) that already has funding for five workshops (two in Montreal, and one each in Berlin, Istanbul, and Berkeley), sponsored by funds from a SSHRC Partnership Development Grant, the Government of Qatar, and three partner institutions (Max Planck Institute for the History of Science (Berlin), Univ. of California (Berkeley), and Medeniyet University (Istanbul)). Based on our recent workshop (Oct. 2015), Prof. Asghar has begun planning for interviews of scientists and science teachers in Turkey and Pakistan. For the premodern period, there is an ongoing research initiative with the Max Planck Institute for the History of Science in Berlin to study science teaching in premodern societies. MCIS member Dr. Sally Ragep has already written extensively on the subject and is leading the historical component of the SSHRC grant. MCIS members R. Wisnovsky, R. Abisaab, and S. Manoukian have been or will be collaborating on various aspects of this project. The second major initiative

is a research project that uses social network algorithms as a new way of measuring and understanding the patterns of scientific productivity in Islamic countries. This is a necessary first step in formulating scientific policy, and will bring together McGill faculty members from Biology, Physics, and Computer Science. We have recruited an undergraduate student from the Max-Planck-Institute of Psychiatry in Munich to start working on the project. Given the scope and range of these projects, we think the MCIS has been and will continue to be an important hub for international research projects related to Islam and Science.

a. Additional confirmed activities for 2015:

1. MCIS workshop: “Science Education in Modern Islamic Societies” hosted by the MCIS and coordinated by Prof. Anila Asghar (22-24 October 2015).
2. Course: 500-level seminar “Islam and Science” for graduate and undergraduate students, currently being taught by Prof. Jamil Ragep and supported by participation of MCIS members, Fall 2015.
3. Implementation of Project: “Science Teaching in Pre-modern and Modern Islamic Societies: Pedagogical Approaches in Religious, Institutional, and Geographical Contexts” [with partners: Univ. Calif. (Berkeley), Max Planck Institute for the History of Science (Berlin), Medeniyet Univ. (Istanbul)]. The goal of the project is to transform our understanding of Islamic scientific education in the pre-modern and transitional periods and to use that knowledge to better situate the current state of science education in several Islamic countries as a prelude to offering policy recommendations for educational reform. This project is supported by a SSHRC Partnership Development Grant, “Science teaching in pre-modern and modern Islamic societies: pedagogical approaches in religious, institutional, and geographical contexts”.

b. Long-term goals of MCIS

1. MOOCS dealing with Islam and Science
2. Online Reading Groups (smaller and with more interaction than MOOCs)
3. Workshops and Lectures
4. Training programs in Islam and Science for McGill graduate students in Science, Islamic Studies, and Education
5. Summer Institutes for scientists to come to Montreal for 1-2 weeks to learn about Islam and Science; particular outreach to doctors from Islamic countries being trained at the McGill Medical School
6. Seminars and workshops for science educators from Canada and Muslim countries on the nature and philosophy of science and scientific reasoning to aid the engagement of their students around these topics
7. Seminars and workshops that enhance dialogue on science policy in Islamic countries, and that bring together policy makers, scientists, and theologians

c. Description of the research program - axes of research

▪ **The Policy Component of the Centre**

The McGill Centre for Islam and Science is one of the first international think tanks that will bring scholars, policy-makers, and educators together to tackle one of the most vexing problems in the Islamic world: the lack of scientific productivity. The Centre will sponsor research into the causes underlying this lag in modern scientific productivity, but will also be pro-active in encouraging Muslim scientists to advocate for increased attention to scientific productivity in Islamic countries. One of the striking aspects of science research, development, and productivity in Islamic countries in the twentieth century has been how poorly they score in relation not only to developed countries but also to comparable, developing nations (Arab Human Development Report, 2003, 2009; OIC, 2007). There are a number of policy analyses and prescriptions that have been put forth, ranging from the lingering effects of colonialism, to the detrimental policies of authoritarian and corrupt governments, to the inherently anti-rational aspects of Islamic culture and beliefs. Unfortunately, many of these analyses, and accompanying prescriptions, depend more on ideology and self-serving agendas than on empirical studies and sound data. They are also often the work of persons who have had little experience in the field of science or science policy. The Centre will take full advantage of its Historical, Scientific, and Educational arms to provide unique perspectives into this current and modern scientific problem.

- **The Historical Component of the Centre**

The McGill Centre for Islam and Science offers a unique opportunity for modern scientists, policy makers, educators, and Islamic Studies specialists to interact and formulate new and creative approaches to the challenging problems facing the development of science in modern Islamic societies. Because of the previous achievements of scientists in the Islamic world, the past plays an important role in the worldview of modern Muslim scientists. But that past is most often framed in either glorified and exaggerated terms or else as an unfulfilled or failed version of “western” science. By providing modern scientists the opportunity to learn about Islamic intellectual history from experts in the field, a more realistic understanding can emerge, one that properly places Islamic science within both a historical and a religious context; the vision of the Centre is that this will help modern scientists appreciate both the limitations and opportunities those contexts provided. Science educators will learn of historical examples that could be integrated into modern textbooks in both the west and in Islamic countries, thereby undermining arguments that science is a solely “western phenomenon.” These educators will be able to interact with experts on education in premodern Islamic societies, providing examples of successful science education in the past. In the other direction, Islamic Studies students and scholars will be able to learn of the techniques and methodologies of modern scientists and educators, offering important points of comparison and contrast to historical studies of science and philosophy in Islam.

- **The Educational Component of the Centre**

One of the exciting avenues that the Centre for Islam and Science offers is the possibility to examine scientific literacy in Muslim societies from historical, educational, and policy perspectives. To this end, science education researchers, practitioners, and policymakers will look at science education structures and systems in pre-modern as well as contemporary Muslim societies. Learning about historical approaches to the teaching of science would inform the current efforts to enhance scientific literacy in Muslim countries and societies. Such research will provide practical examples from Islamic education on the one hand, and, on the other, provide policy makers with precedents showing that science teaching was in fact fairly prevalent within pre-modern Islamic societies. Looking at existing perceptions about the epistemology of science would be central to this ongoing work, since understanding the inquiry methods, tools, and processes used to construct scientific knowledge is crucial to develop a meaningful scientific literacy. Furthermore, exploring the current social controversies and debates around various issues, for example, bioethics and evolution, would lead to a greater understanding of the complex factors that shape the attitudes of Muslims toward modern science.

d. Contribution to training (graduate students, postdoctoral scholars, research associates, etc.)

Currently the SSHRC grant allows for hiring a post-doc and four graduate students over three years. The post-doc (Dr. Sally Ragep) is a full member of the Centre and actively involved in its activities, the planning of its upcoming workshops related to science education, and research in the Historical Component, in particular the Islamic Scientific Manuscripts Initiative. Student research assistants from Islamic Studies and Education will be hired to assist with the workshops, collect data, and compile bibliographies related to science teaching in Islamic societies. One of Prof. Abouheif's postdoctoral fellows, Dr. Abdul Matteen Rafiqi, has been actively involved with MCIS over several years. We expect that additional students and postdocs will be involved with Centre activities as we secure additional funding.

e. Funding for research activities

MCIS currently has funding from the Government of Qatar [\$50,000], a SSHRC Partnership Development Grant [\$154,024], monies for the SSHRC grant from partner institutions (Max Planck Institute, Berlin; Univ. California Berkeley; Medeniyet University, Istanbul [\$120,100]) for a total amount of \$324,124. This has been used already to bring two speakers to McGill; in the future, the bulk of these funds will support our science education project, which is scheduled to end in 2019. We are also in the process of applying to the Templeton Foundation and have approached a number of ambassadors to Canada from Islamic countries. Some funds may be available from Prof. Jamil Ragep's Canada Research Chair.

IV. Strategic positioning

a. Positioning in relation to other research units and groups at McGill, in Quebec and Canada, and internationally

There are no comparable centres in Canada. The “Center for Islam and Sciences”, established by Muzaffar Iqbal in 2000, has in recent years changed its focus to religious sciences and has changed its name to “Center for Islamic Sciences”. Hampshire College in Massachusetts has a Center for the Study of Science in Muslim Societies (SSiMS) that has focused mainly on conferences and lectures, along with ongoing research of its Director. It currently has a project focusing on Islam and science on the web. Because it is housed in a liberal arts college, the opportunities for research programs and activities are more limited than is the case at McGill. We should say that the Director of the SSiMS, Prof. Salman Hameed, is an active research collaborator with Prof. Anila Asghar and has supported activities of the MCIS. Nidhal Guessoum, professor at the American University of Sharjah, UAE, has organized a number of activities on Islam and science in Paris and elsewhere, but there is no ongoing centre. Prof. Ehab Abouheif has contributed to his activities in the past.

As an interdisciplinary centre, MCIS includes members from at least 4 McGill faculties. Though formally the lead faculty is Arts, the Centre has strong connections with other faculties, and our goal is to ensure that members from many disciplines work cooperatively on an equal footing. In this regard, the Institute of Islamic Studies and MCIS members from IIS should be seen as partners rather than as having long-term leading or governing roles. In particular, there is no formal relationship between MCIS and IIS, and IIS has not provided funding for MCIS activities (though collaborations are possible in the future). However, the IIS has provided and will continue to provide administrative support (e.g. processing financial claim forms, etc.); this is done within the general framework laid out between Arts, CRC and IIS in which Ragep’s CRC activities (among which is included MCIS; see CRC INSTITUTIONAL COMMITMENTS SUMMARY 2015 on p. 35 of the proposal) are supported administratively by IIS. In the future, members of MCIS from other faculties may and will be encouraged to take leading administrative positions.

b. Added value and importance in relation to the strategic plans of the University, the Lead Faculty, and other schools, departments, or institutes

The McGill Centre for Islam and Science will contribute in significant ways to the strategic plans of the University. First, by bringing together students and researchers from 3 faculties, it will provide an important interdisciplinary nexus. In particular, it will help bridge the divide between the humanities and sciences. For the Institute of Islamic Studies, it promotes the ongoing research by five IIS professors and researchers on “the rational sciences in Islam”, which has been funded by 2 CFIs and a CRC. In addition to J. Ragep, S. Ragep and R. Wisnovsky,

Professors R. Abisaab and S. Manoukian have been active in research on the relation of rationality and knowledge production within Islam.

In terms of McGill's Strategic Research Plan (2013-17), MCIS will advance at least three of its Areas of Research Excellence:

- *Examine fundamental questions about humanity, identity, and expression:*
By promoting research, discussion, and international exchanges, MCIS will be a leader in examining the relation of Islam (both as a religion and as an identity) to scientific production, both in the present and the past. This has emerged as a major intellectual, social, and political issue in the first part of the twenty-first century, and MCIS is poised to be a major contributor to the ongoing conversation.
- *Strengthen public policy and organizations, and create a deeper understanding of social transformation:*
The Centre plans to submit proposals, based on our research, for reforming science education and science policy in Islamic countries and societies worldwide. Asghar and Abouheif have already been involved in these initiatives, and the ongoing research sponsored by the MCIS will build upon their efforts, those of fellow MCIS members, and other collaborators. A major focus of our research on science education is the transformation from pre-modern to modern institutional structures and methodologies of teaching.
- *Advance knowledge of the foundations and applications of technology in the Digital Age:*
The Islamic Scientific Manuscripts Initiative (ISMI) uses an innovative objective-relational database to catalogue and analyze premodern Islamic scientific texts. This is a fundamental tool that is being used to understand science teaching and networks in Islamic societies, one of the major research programs of the MCIS. With our partners at the Max Planck Institute for the History of Science in Berlin (MPIWG), we are making this open-source technology available to researchers in a wide variety of fields. A workshop is planned in Berlin in Feb./March 2016 to which a number of researchers in several fields of Islamic studies have been invited. Given the database's potential, we believe this technology will be an important contribution to researchers in a number of areas of Digital Humanities.

c. Future development plans

Our mission statement provides our strategic vision: "To explore the interactions of science and religion in Islamic societies, both past and present, and to advance policy and educational proposals based on that exploration." Our primary role is to act as a scholarly resource regarding this highly contentious area of discourse. This will involve focused, objective research that can be used by other researchers, policy makers, and educational leaders. We also plan outreach and educational activities to disseminate and mobilize knowledge based on this research.

As listed above, our long-term development plans include: 1) outreach (MOOCS and online reading groups); 2) an ongoing lecture series; 3) summer institutes for Muslim scientists, science educators, and professionals; 4) a postdoctoral fellowship program; and 5) seminars and workshops for interested students from our 3 faculties that would promote interdisciplinary

research. As mentioned, MCIS will continue its already successful efforts to fund and expand these activities through grants from foundations, governmental agencies, individual donors, and interested governments.

V. Governance

a. Board Members:

Chair of the Board: Dean of Arts (or delegate)

Dean of Education (or delegate)

Dean of Science (or delegate)

Vice-Principal (Research and International Relations) (or delegate)

Provost of McGill University (or delegate)

Prof. F. Jamil Ragep (Islamic Studies), Director of the MCIS

Prof. Ehab Abouheif (Department of Biology), Active Full Member of the MCIS

Prof. Anila Asghar (Department of Integrated Studies in Education), Active Full Member of the MCIS

A graduate student

A postdoctoral fellow

At least one person from outside the University: Prof. Salman Hameed has agreed to fill this role.

The terms of appointment of the board members, other than the deans or their delegate(s), will be three years for faculty and two years for students and postdoctoral fellows.

b. Frequency of board meetings as well as the timing of the annual general meeting

The board meets once a year, in the first half of May. During this meeting, the board is to receive the annual report, review activities and membership, approve the budget, and help resolve any difficulties that may have arisen during the past year.

The annual general meeting of all members of MCIS also takes place in the first half of May. During this meeting, the annual report is presented and approved.

VI. Membership

a. Descriptions of the classes of membership:

Full members: senior researchers with major research affiliation with MCIS

Associate members: established researchers with significant research affiliation with the centre

Visiting members: a visiting scholar, appointed to the MCIS for a limited term

Postdoctoral scholar/research associate members

Graduate student members

b. List of members in the defined categories:

Full Member	Institution
Dr. Anila Asghar	Education, McGill University
Dr. Ehab Abouheif	Biology, McGill University
Dr. Jamil Ragep	Islamic Studies, McGill University
Dr. Robert Wisnovsky	Islamic Studies, McGill University
Dr. Sally Ragep	Islamic Studies, McGill University
Dr. Matteen Rafiqi (postdoc)	Biology, McGill University
Dr. Ahmad Dallal,	History and Archaeology American University of Beirut
Dr. Athar Osama	CEO, Technomics International Ltd., UK Honorary Senior Research Associate at University College London
Dr. Rana Dajani	Hashemite University, Jordan
Dr. Robert Morrison	Religion, Bowdoin College
Dr. Salman Hamid	Integrated Science & Humanities, Hampshire College
Dr. Saouma BouJaoude	Center for Teaching and Learning American University of Beirut
Ms. Fateme Savadi	Islamic Studies, Graduate Student, McGill
Ms. Sahar Fazeli,	Education, Graduate Student, McGill
Mr. Paul Kaplick (Visiting Member)	Max-Planck-Institute of Psychiatry

- **Prof. Anila Asghar**, Education, McGill University, is one of the founding members of the MCIS. Her expertise is in science education, and she is leading the modern component of the MCIS project on science education in Islamic societies. In this, she works closely with MCIS members S. Ragep and Sahar Fazeli. She has also worked with Prof. Abouheif on the question of teaching evolution in Islamic countries.
- **Prof. Ehab Abouheif**, Biology, McGill University, is Canada Research Chair in Evolutionary Developmental Biology and E.W.R. Steacie Fellow. As one of the founding members of MCIS, he leads the policy component of the Centre and has also been active in outreach (online course with Matteen Rafiqi and the IPLAI reading group).

- **Prof. Jamil Ragep**, Islamic Studies, McGill University, is Canada Research Chair in the History of Science in Islamic Societies. His work is central to the historical axis of MCIS. He currently collaborates with other MCIS members: A. Asghar (co-PI on the SSHRC partnership development grant); S. Ragep (Islamic Scientific Manuscripts Initiative); R. Wisnovsky (Rational Sciences in Islam).
- **Prof. Robert Wisnovsky** (James McGill Professor, Islamic Studies) is one of the world's leading researchers in Islamic philosophy and theology. Beginning in 2008, he and J. Ragep have been co-directors of the Rational Sciences in Islam project, with 2.5 million dollars in funding from the Canada Foundation for Innovation. His research overlaps that of Ragep, providing an important philosophical and religious dimension to pre-modern Islamic science. His work is thus a fundamental component of the historical axis of MCIS.
- **Dr. Sally Ragep** is Senior Researcher in the Institute of Islamic Studies. She has strong research interests in science teaching in premodern Islamic societies and has published extensively on the subject. She and Prof. Asghar are spearheading the SSHRC-funded research program on science teaching in Islamic societies and are working together to bridge the pre-modern/modern divide. Their joint convening of the Oct. 2015 workshop dealing with science teaching in the modern period proved the viability and importance of bringing in the historical dimension.
- **Dr. Matteen Rafiqi**, (postdoc), Biology, McGill, Dr. Matteen Rafiqi is currently research associate in the Abouheif lab. His research focuses on evolutionary biology, and he is interested in the reconciliation between Islam and Science. He has participated in the IPLAI reading group, offered the online course on Islam and Evolution with Dr. Abouheif, has given a public lecture on Islam and Evolution, and has participated in workshops organized by MCIS.
- **Prof. Ahmad Dallal**, formerly Provost of the American University of Beirut (2009-2015), is currently Professor in its Department of History and Archaeology. Prof. Dallal is a recognized and eminent scholar of the history of Islamic science, having authored two books and numerous articles on the subject. Prof. Dallal's work has been widely recognized, and he was the recipient in 2013 of the prestigious Kuwait Foundation for the Advancement of Sciences (KFAS) prize for his contributions to the field of Arabic and Islamic scientific heritage. His book, *Islam, Science and the Challenge of History* (Yale UP, 2010), provides an insightful look at a number of key issues in the field, ranging from technical issues in astronomy and other areas of learning, to the creative engagement of science, philosophy and theology in Islam, to issues of decline and science's place in contemporary Islamic societies. The latter built upon his work on 19th- and 20th-c. Islamic revivalist movements, and the dilemmas facing those societies that somehow have been unable to build robust scientific infrastructures, even when compared to other countries in the developing world. These qualifications make him an ideal candidate for membership in the MCIS, since he bridges the historical, policy and educational components of the Centre. He also was the keynote speaker at the Centre's workshop in October 2015 on science teaching in the contemporary Islamic world and indicated a keen interest in partnering with the MCIS.

- **Dr Athar Osama** is Honorary Senior Research Associate at University College London and is CEO of Technomics International Ltd., UK. He is the Founder of the Pakistan Innovation Foundation (PIF), a non-profit, privately-funded and donor-supported entity, which since August 2012 has advocated for innovation in the private sector and in the broader Pakistani society. He is the Founder and Editor of Muslim-Science.Com, which covers science, technology, innovation, and entrepreneurship in the Islamic world. Muslim-Science is dedicated to the revival of science and science-driven innovation and entrepreneurship in the Islamic World by creating a space for an informed and unbiased dialogue about science, innovation, and entrepreneurship in Muslim Lands as well as important, but often overlooked issues, of science, religion, and society in the Islamic World. He writes a regular column called “Islam-Analysis” in SciDev.Net, which is devoted to providing news, views and analysis on information about science and technology for global development. Dr. Osama is co-editor of the recently published major report “Science at the Universities of the Muslim World,” funded by the Templeton Foundation. Osama’s wealth of experience and expertise will add important dimensions to both the policy and education axes of MCIS.
- **Prof. Rana Dajani** is an expert on biological sciences, Muslim women in science, and science education reform in higher education in Muslim universities. She is currently an Associate Professor at Hashemite University, Jordan. As a Muslim woman scientist, she has been a leading voice in finding ways to reconcile faith and modern science. Dr. Dajani is a collaborator on the MCIS science education project funded by SSHRC, and gave the inaugural MCIS lecture in September 2014. She would contribute to the MCIS on many levels; particularly, her work on the relationship between theological and scientific understandings of modern science in Muslim societies would be an excellent complement to the work of the MCIS.
- **Prof. Robert Morrison** is Professor of Religion at Bowdoin College in Maine. He is a preeminent scholar of science and religion in Islam and has written extensively on the subject. He also teaches courses on Judaism and is a leading authority on cross-cultural transmission of science during the early modern period that involved Islamic, Jewish and Byzantine scholars. Morrison’s monograph *Islam and Science: The Intellectual Career of Niẓām al-Dīn al-Nīsābūrī* (Routledge, 2007) was awarded the 2009 World Prize for the Book of the Year of the Islamic Republic of Iran in Islamic studies, and he currently has a book in press that deals with a fourteenth-century Jewish astronomer who was an important bridge between Islamic and early modern European astronomy. He has collaborated with both J. and S. Ragep on a number of projects, and is a member of the MCIS science teaching project funded by SSHRC. Given Morrison’s engagement with science and religion issues in a number of cultural contexts, he would bring a wide range of both expertise and perspective to the MCIS.
- **Prof. Salman Hamid** is Charles Taylor Chair and Associate Professor of integrated science & humanities in the school of Cognitive Science and director of the Center for the Study of Science in Muslim Societies (SSiMS), Hampshire College, Massachusetts. He holds a Ph.D. in astronomy from New Mexico State University at Las Cruces and a B.S. in physics and astronomy from the State University of New York at Stony Brook. His primary research interest focuses on understanding the reception of science in the Muslim world and how Muslims view

the relationship between science and religion. He recently led a 4-year National Science Foundation-funded study on the reception of biological evolution in diverse Muslim societies. He is also leading a study to understand and analyze the discourse and participants in online Islam and Science videos. He has taught courses on “Evolution, Islam, and Modernity”, “Science in the Muslim World”, “Creating science fiction short films using real science”, “Science and Religion: Biological evolution in the public sphere”, and “History and Philosophy of Science and Religion”. Prof. Hamid also runs Irtiqa, a science and religion blog with an emphasis on scientific debates taking place in the Muslim world, hosts an online astronomy video series in Urdu, “Science ka Adda”. Salman gave an invited public lecture for the MCIS in 2015, and is an existing collaborator with Ehab Abouheif and Anila Asghar on Policy and Education of Islamic Science.

- **Prof. Saouma BouJaoude** is an expert on science education and has been actively engaged in science education reform through his research and practice in the Middle East. He is Professor and Director of the Center for Teaching and Learning at the American University of Beirut. Dr. BouJaoude is a collaborator on our SSHRC Partnership Development project at the MCIS focusing on science teaching in Islamic societies and was a participant in the MCIS- and SSHRC-sponsored workshop in October 2015 on science teaching in contemporary Islamic countries. His contribution to the MCIS would include a critical analysis of issues confronting science education in Middle Eastern societies.

GRADUATE STUDENT MEMBERS OF MCIS

- **Ms. Fateme Savadi**, Islamic Studies, McGill, is working with S. Ragep on pre-modern science education in Islamic societies and on the contemporary teaching of science in Iran.
- **Ms. Sahar Fazeli**, Education, McGill, is working with Prof. Asghar on a number of research projects related to the work of MCIS.

VISITING MEMBER (Summer 2016)

- **Mr. Paul Kaplick**, Max-Planck-Institute of Psychiatry in Munich, an undergraduate student from the Max-Planck-Institute of Psychiatry in Munich, will work with Prof. Abouheif in Summer 2016.

ASSOCIATE MEMBERS

Associate Member	Institution
Dr. David Y. Thomas	Biochemistry, McGill University
Dr. Mourad El Gamal	Engineering, McGill University
Dr. Rula Abisaab	Islamic Studies, McGill University
Dr. Setrag Manoukian	Islamic Studies, McGill University
Dr. Shaheen Shariff	Education, McGill University
Dr. Ihsan Fazlioglu	Philosophy, Istanbul Medeniyet University
Dr. Zoubeida Dagher (pending)	Science Education Center for Science, Ethics, and Public Policy University of Delaware

- **Prof. David Y. Thomas**, Chemistry, McGill, is a Canada Research Chair in Molecular Genetics. His interest and involvement in the MCIS comes from an exchange program between McGill University and Taibah University in Saudi Arabia. MCIS is exploring providing students who take part in this exchange program broad training in the history of Islamic science as well as an opportunity to discuss contemporary problems facing scientists in the Muslim world.
- **Prof. Mourad El Gamal**, Electrical and Computer Engineering, McGill, is head of The McGill WICs & MEMS laboratory, which is dedicated to the exploration and design of advanced integrated circuits and MEMS devices for communications and sensing applications. He has a strong interest in advancing science and technology in Muslim countries.
- **Prof. Rula Abisaab**, Islamic Studies, McGill, is currently director of IIS. Her fields of expertise include rational discourse in Islam and institutions of learning. Because of her expertise in teaching institutions, she will be an important resource when dealing with science teaching, especially in historical context, one of the core projects of MCIS. In Winter 2015 she taught a course on the madrasa (school) with the assistance of MCIS member Sally Ragep; science teaching was an important part of the course.
- **Prof. Setrag Manoukian**, Islamic Studies, McGill, has research interests in how knowledge is understood in Iran (both historically and contemporaneously), and he has been doing research on technology in Iran. Thus his expertise fits in with all 3 MCIS axes (the historical, educational and policy) and adds the important geographical component of Iran to the areas of other members.
- **Prof. Shaheen Shariff**, Education, McGill, has research interests in educational policy. Her extensive experience will provide MCIS with scholarly resources that will be critical as we move to formulate positions on educational policy in Islamic countries.
- **Prof. Ihsan Fazlioglu** is professor of philosophy and Dean of Arts at Istanbul Medeniyet University where he has been since 2011, having previously taught at Istanbul University and here at McGill, where he was senior researcher for the CFI-funded Rational Sciences in Islam project for 3 years. He has also been instrumental in establishing a history of science program at Medeniyet University and is editor-in-chief of the journal *Nazariyat*, which is devoted to the

history of science and philosophy in premodern Islamic societies. His main research has concentrated on the history and philosophy of the mathematical sciences in Islam, and he has published a great number of books and articles dealing these subjects. Two articles in particular have been groundbreaking: “The Samarqand Mathematical-Astronomical School,” *Journal for the History of Arabic Science* 14 (2008): 3-68 and “Between Reality and Mentality: Fifteenth-Century Mathematics and Natural Philosophy Reconsidered,” *Nazariyat* 1 (Nov. 2014): 1-39. He has collaborated on a number of projects with S. Ragep and J. Ragep, and is a partner in the Partnership Development SSHRC project: “Science Teaching in Pre-modern and Modern Islamic Societies”. Related to that partnership, he was a participant in the MCIS- and SSHRC-sponsored workshop in October 2015 on science teaching in contemporary Islamic countries, and is organizing a workshop (to be held in 2017 in Istanbul) on science teaching in Islamic lands during the transitional period of the 19th and early 20th centuries.

- **Prof. Zoubeida Dagher** (pending) is Professor of Science Education at the School of Education and a Faculty Fellow at the Center for Science, Ethics, and Public Policy, University of Delaware. She has also been serving as President of the International History and Philosophy of Science Teaching [IHPST] Group. Her research interests include the nature of scientific methods and practices and representations of scientific epistemology in North American and Middle Eastern contexts. She has been investigating issues related to scientific literacy and science teaching in Arab countries. Her work on the nature and representations of scientific epistemology and practices in curriculum and instruction would be very relevant to the goals of MCIS.

c. Description of the process for accepting new members in the centre

Nominations for new full and associate members of MCIS must include full CVs and letters of support. They must be submitted to the board for approval. Terms of membership are renewable, and each term will be six years for full and associate members, two years for student and postdoctoral scholar members, and one year for visiting members.

Note regarding expanding membership to reach a “critical mass”:

As a provisional centre, we have been building our resources with a small core group that could meet frequently and act decisively to promote our activities. If granted permanent status, we would immediately expand the membership in several ways. We would ask our current associate members to become full members, and we would seek additional members from the wider McGill and Quebec academic communities. We have already started the process by discussing MCIS with a number of McGill colleagues and colleagues from other Montreal universities. Furthermore, we will include a number of international colleagues as either full or associate members. Among these would be the collaborators for our SSHRC partnership development grant and the individuals who wrote supporting letters attached to this proposal.

VII. Facilities and other resources

- Office space: 025 Morrice Hall
- Access to the Islamic Scientific Manuscripts Initiative (ISMI) database
- Biology labs under the supervision of Prof. Ehab Abouheif
- Prof. Anila Asghar's science education research lab space
- Support staff (e.g. technical, administrative, professional): Katrin Dinkel (10hrs/week); Dr Sally Ragep, as part of her responsibility as postdoctoral fellow for the SSHRC Partnership Development grant; some administrative support from the Institute of Islamic Studies

a. Plans for future expansion of infrastructure:

We anticipate having a staff member work half-time by Fall 2016. We are currently planning to add a number of features to the website, namely academic resources in the form of links, articles, videos, and an enhanced blog that will allow for comments.

VIII. Budget

a. Overview of operational budget

We currently have one staff member, who works 10 hours per week. We anticipate that we will have a half-time position (20 hours) within a year or two. Infrastructure is secured through an agreement between the Faculty of Arts and CRC Jamil Ragep for use of Morrice Hall 025 (see Appendix C) and for ongoing use of all CFI-purchased equipment (computers, servers, scanners, etc.) that is housed in Morrice Hall and in Burnside. The Director will forego any stipend or other considerations (e.g. course releases). As detailed above, the Centre plans to conduct 5 workshops in the next 3 years; funding is secured through current MCIS funds, a SSHRC Partnership Development Grant, and partner contributions.

b. Operational expenditures over five years

There is post-doc, RA funding, and operational funding in Ragep's CRC and the SSHRC partnership development grant that can be used for some operational expenses. We also have funds from our State of Qatar grant that can be used for operational expenses. There is certainly enough for the website and to staff the Centre part-time until 2018, at which time we expect our additional fundraising efforts to have borne fruit.

SALARIES/RAships

- Salary of Staff Assistant for CY 2015: \$12,000 (secured; Gov. of Qatar)
- 1 Postdoc for 2015-2018: \$75,000 (secured; SSHRC)
- 12 RAships in Education and Islamic Studies for 2015-2018: \$60,000 (secured; SSHRC)

WORKSHOPS ("Science Teaching in Pre-modern and Modern Islamic Societies" project)

- Workshop in Montreal, October 2015: \$25,000 (secured; Gov. of Qatar)
- Workshop in Berlin, Feb. 2016: \$28,000 (secured; MPIWG)
- Workshop in Berkeley, Oct. 2016: \$13,210 (secured; Univ. of Calif. Berkeley and SSHRC)
- Workshop in Montreal, May 2017: \$16,460 (secured; SSHRC)
- Workshop in Istanbul, Dec. 2017: \$28,000 (secured; Medeniyet Univ.)

TECHNICAL SERVICES

- ISMI database development 2015-18: \$7,500 (secured; MPIWG)
- Server Maintenance and Backup 2015-18: \$7,500 (secured; MPIWG)
- IT Technician 2015-18: \$10,533 (secured; SSHRC)

c. Plan for securing future funding for operational expenses

We are currently applying to the Templeton Foundation for funding for our proposed Summer Training Institutes, which would run from 2017-2020. We aim to invite Muslim students (e.g.,

advanced doctoral/postdoctoral fellows in science, and medical and engineering students) to these Training Institutes to explore how emerging Muslim leaders in science engage with modern science and the ways in which they negotiate any epistemological tensions between their theological convictions and secular science. Scholars and experts on Islamic studies, history, science, and policy will be invited to these workshops to exchange views from various angles and interdisciplinary perspectives. Islamic studies experts will help inform the work of scientists and physicians in terms of developing a broader understanding of the manifold ways Muslims have confronted the issue of rationality and religious teachings. Additionally, they will be able to gain a better understanding of critical policy issues concerning scientific research and development in various Muslim countries, and consider ways to promote scientific research and literacy in Muslim societies.

In the future, Prof. Abouheif intends to apply for a Trottier Science Policy Fellowship at McGill to find new ways of measuring science productivity in Islamic countries. Additionally, we are seeking funds from the Governments of Qatar, Kuwait, and the UAE to support the Centre's projects and activities; we (aided by Provost Manfredi) have already been in discussion with the ambassadors of all 3 countries. In addition, we are exploring foundational support (e.g. Templeton, Alfred P. Sloan Foundation, Mitacs, etc.), which would include moneys for operational expenses. Because of the intense interest in our work, and the positive initial responses, we strongly believe that our fundraising efforts will be successful, enough to put the Centre on a strong, long-term foundation.

IX. Appendices:

- a. Bylaws
- b. Letters of support
- c. Institutional commitment of Faculty of Arts to MCIS and allocation of space for Ragep's CRC

APPENDIX A

BYLAWS

Bylaws for the Operation of the McGill Centre for Islam and Science

1. Name and Location

Name: McGill Centre for Islam and Science (MCIS)
Address: Morrice Hall Room 025
3485 McTavish Street
Montreal, Quebec H3A 0E1
www.islam-and-science.org
islam.science@mcgill.ca

2. Purpose

The McGill Centre for Islam and Science represents a major initiative to deal with one of the most pressing issues of the first part of the 21st century, namely the role of rational scientific and philosophical discourse in Islamic societies, both past and present.

Among the goals of the Centre is to deal with these and related issues through a tripartite structure consisting of interrelated research, teaching and outreach components. These are:

- 1) Science Policy in Islamic Countries: instituting pathways to innovation
- 2) The Rational Sciences in Islam: historical perspectives
- 3) Scientific Literacy in Muslim Societies

As a research centre, MCIS will sponsor lectures, workshops, and reading groups, will promote interaction between graduate students and postdocs in different faculties (specifically Arts, Science, and Education), and will engage various constituencies and communities in Montreal and Quebec in our activities.

3. Management

The governance of MCIS is the responsibility of its board. The director of MCIS is responsible for the management and reports to the dean of the Lead Faculty, which is the Faculty of Arts (or his delegate), who also acts as the chair of the board.

In the event of an extended absence of the director, an associate director can manage the MCIS.

4. Membership of the board

- Dean of Arts (or delegate): Chair of the board
- Dean of Education (or delegate)
- Dean of Science (or delegate)
- Vice-Principal (Research and International Relations)
- Provost of McGill University (or delegate)
- Director of the MCIS
- Two Active Full Members of the MCIS
- A graduate student
- A postdoctoral fellow
- At least one person from outside the University

The terms of appointment of the board members other than the Deans, the Vice-Principal and the Provost will be three years for faculty and two years for students and postdoctoral fellows.

5. Appointment of the Director

Recommendations for nomination of the director and, if necessary, the associate director of MCIS will be made to the board by a subcommittee consisting of the Dean of Arts, two active full members and one other member of the board. If necessary, the board may decide to conduct an open search for a director. The recommendation of the board for the appointment of a director and, if necessary, associate director, will be conveyed to the Provost by the Dean of Arts. The Provost has the responsibility of approval of the appointments. In the case of appointments across multiple Faculties, the Deans of all Faculties affected must be consulted. The appointment of the director and associate director will normally be for a term of six years.

6. Annual Report

The director of MCIS will prepare the annual report, which will include all financial details of the operation of MCIS, along with the centre's measurable goals for the coming year. This will be presented to the board for approval. Following its approval, the annual report will be submitted to the Provost, the Vice-Principal (Research and International Relations), and the Deans of Arts, Science, and Education.

7. Membership of the MCIS

MCIS's classes of membership are as follows:

Full members: senior researchers with major research affiliation with MCIS;

Associate members: established researchers with significant research affiliation with the centre;

Visiting members: visiting scholars, appointed to the MCIS for a limited term;

Postdoctoral scholars/research associate members; Graduate student members.

Nominations for new full and associate members of MCIS must include full CVs and letters of support. They must be submitted to the board for approval. Terms of membership are renewable, and each term will be six years for full and associate members, two years for student and postdoctoral scholar members, and one year for visiting members.

8. Research Resource Allocations and Budget

The MCIS's budget is prepared by the director for the approval by the board. Recommendations for the allocation of MCIS resources to members will also be made by the director to the board. Full and associate members can bring appeals concerning resource allocation to the board, whose decision will be final.

9. Annual General Meeting

There will be an annual general meeting of all members of MCIS in the first two weeks of May, during which the annual report will be presented and approved.

Every MCIS member who attends the annual general meeting can vote. If a member is unable to attend the meeting, he may delegate an attending member to vote on his behalf by proxy vote.

10. Meetings of Board

The board meets once a year, usually immediately after the annual general meeting. During this meeting, the board is to receive the annual report, review activities and membership, approve the budget and help resolve any difficulties that may have arisen during the past year.

An extraordinary meeting of the board will be convened if a written request to do so, signed by at least two-thirds of the full and associate members of the MCIS, is submitted to the chair of the board.

11. Research Agreements, Contracts, Grants, and Gifts

The MCIS does not have the right to sign and enter into research agreements, grants, or contracts that require McGill institutional approval from authorized University signing officers. Similarly, gifts to the MCIS will be managed through the appropriate University channels.