McMaster University

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Gilmour Hall, Room 210
1280 Main Street West
Hamilton, Ontario, Canada
L8S 4L8

Phone: 905.525.9140, Ext. 24337
Fax: 905.526.9884
E-mail: univsec@mcmaster.ca
http://www.mcmaster.ca/univsec

<u>**VIA EMAIL**</u>

June 8, 2022

TO: Michelle Dion
              Director, SPARK

AND TO: Tracy Prowse
              Associate Dean, Social Sciences

FROM: Andrea Thyret-Kidd
              University Secretary

SUBJECT: **Certificate of Completion approvals**

I am writing to confirm that, on the recommendation of Undergraduate Council and the University Planning Committee, the Senate on June 8, 2022, approved the **establishment of three Certificate of Completion programs in Organizational Learning & Program Evaluation, Qualitative Data Collection & Analysis, and Quantitative Data Collection & Analysis.**

Please disseminate this information as appropriate. Please let me know if you have any questions or concerns.

Cc   K. Dej, Acting Vice-Provost, Faculty

McMaster University | Spark: a centre for social research innovation

L.R. Wilson Hall, 5th Floor
Faculty of Social Sciences
1280 Main Street West
Hamilton, ON   L8S 4L8

Michelle L. Dion
Professor & Academic Director
✉ dionm@mcmaster.ca
🌐 spark.mcmaster.ca

To: Certificates and Diplomas Committee
From: Michelle Dion, Academic Director, Spark   *MDion*
Date: April 28, 2022
Subject: Proposal for Certificates of Completion

In light of recent feedback from the committee, please find attached a revised proposal for three Certificates of Completion to be offered by Spark.

To receive a Certificate of Completion, learners will have to complete two short courses (each 15 contact hours, for a total of 30 contact hours) with an average letter grade of C or better.

Consistent with practices by other units,* learners will have some choice in which courses they complete for the Certificates of Completion.

Each Certificate of Completion is listed below, with the courses which can be used toward the 2-course requirement.

1. Organizational learning & program evaluation (successfully complete any 2 of the following courses):
• Assessing Strengths and Needs in Communities
• Incorporating Evidence into Strategy
• Impact Evaluation
• Cost-Benefit Analysis in the Social Sector
2. Qualitative data collection & analysis (successfully complete any 2 of the following courses):
• Interviewing and Focus Groups
• Applied Ethnography
• Trauma-informed Data Collection
• Analyzing Qualitative Data
• Qualitative Data Analysis (QDA) using NVivo
3. Quantitative data collection & analysis (successfully complete any 2 of the following courses):
• Survey design and analysis
• Numeracy and descriptive statistics
• Foundational Statistics
• Regression
• One of either,
   ○ Data Wrangling, or
   ○ Data Visualization

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* We would like to note that giving learners this type of flexibility in choosing among a range of short courses to plan their Certificate of Completion is an established approach used by McMaster Continuing Education for at a minimum the following 3 Certificates of Completion:
• Certificate of Completion in Academic Writing (complete 2 out of 4 courses)
• Health Analytics Certificate of Completion (complete 3 out of 5 courses)
• Essentials Certificate of Completion (complete 5 days of coursework from extensive list)

Certificates of Completion in

Social Research

Spark—a centre for social research innovation

April 2022

1. PROGRAM

PROGRAM DESCRIPTION

The proposed Social Research Certificates of Completion are primarily focused on those not currently enrolled at McMaster who are seeking opportunities to upskill within their current positions or build critical analysis, decision-making and leadership skills for their next career opportunity. The skills taught will directly support answering common and significant questions within the social sector (not for profits, social enterprises, and government organizations).

Research skills are often thought of as primarily useful to those in academic careers. We have seen a high level of demand across the social sector, particularly in not-for-profit organizations, for what are often labeled critical thinking and decision-making skills as well as specific research or analytic skills. Critical thinking and decision-making are not inherent traits but abilities that emerge as one effectively gathers, correctly analyzes and interprets, and has the confidence to act on data. Thus, critical thinking and evidence-based decision-making require a minimum competence in the analytical methods used to collect and interpret evidence. Seeing this significant skill gap - one reinforced in hundreds of conversations with community organizations, funders, businesses involved in social innovation and government agencies - propelled development of the proposed collection of Certificates of Completion.

Spark—a centre for social research innovation is a Faculty of Social Sciences centre dedicated to teaching, advising and directly supporting faculty, staff and students in social research methodology. Spark also has an applied research team that conducts research and evaluation for not-for-profits, government and businesses in Hamilton and across Canada. Through that work, we directly engage with clients in how to measure, understand, and then significantly increase the impact and efficiency of their programs. This work involves extensive capacity building with a few individuals within client organizations. Several of them have committed active support and even volunteered to co-pilot the proposed certificates.

We know that there is deep interest among our clients and others in the social sector and government in the methods we teach, and real opportunity for expanding social impact by sharing these skills beyond McMaster. We believe the university's deep dedication to community impact and Spark's combination of methodological expertise and practical applied research experience makes us well positioned to offer these certificates.

Here, we are proposing a series of Certificates of Completion. We plan to launch 3-4 new, short courses each year over the next several years. The courses are grouped into 3 Certificates of Completion, and learners would need to complete satisfactorily two of the short courses to be eligible for the Certificate of Completion. Initially, our primary marketing and recruitment strategy will leverage our networks and working relationships with non-profits in Southern Ontario to provide training to their existing workforce, with additional seats available to individual learners. These Certificates of Completion will prepare participants not only to be better consumers of applied research studies and reports, but also to gain familiarity and experience with the basic tools of data collection, analysis, and representation in social research and to know when their needs outstrip their in-house expertise, requiring consultation or support from an outside research partner.

PROPOSAL PREPARATION AND CONSULTATION PROCESS

Spark: a centre for social research innovation engaged in an extensive consultation process, both to identify potential overlaps or opportunities for collaboration.

List of Consultations - internal:
Graduate Diploma in Epidemiology – Robby Nieuwlaat
Engineering – internal certificates – Sarah Sullivan
Engineering – external certificates – Florent Lefevre-Schlick
Sherman Centre for Digital Humanities – Andrea Zeffiro and Jay Brodeur
MELD/MERGE, Faculty of Humanities - Sean Corner and Anna Moro
Office of Community Engagement – C.A. Borstad-Klassen and David Heidebrecht
McMaster Indigenous Research Institute – Tracy Bear
Indigenous Studies – Adrienne Xavier
Intersession – John McLaughlin
Faculty of Social Sciences Dean, Jeremiah Hurley
Faculty of Social Sciences, Undergraduate – Tracey Prowse and Lynn Giordano
Faculty of Social Sciences, Graduate and Research – James Gillett
Faculty of Social Sciences, Director of Finance and Administration – Juliette Prouse
Faculty of Social Sciences Community Research Platform – Leora Sas van der Linden
Faculty of Social Sciences Advanced Research on Mental Health and Society – Marisa Young
Faculty of Social Sciences departments - all were invited to consult with us in development:
       Sociology – Tina Fetner
       Economics – Marc- Andre Letendre
       Anthropology – Tina Moffat
       Social Work – Christina Sinding and Allyson Ion
       Master of Public Policy in Digital Society – Vass Bednar

List of Consultations - External:
Salvation Army of Hamilton, Lawson Ministries – Deanna Finch-Smith and Lisa Schumpf
Banyan Community Services – Kim Ciavarella
Grenfell Ministries – Kim Ritchie
Hamilton Community Foundation – Sarah Glenn and Lorraine Valmadrid

Invitations to Consult Declined:
Faculty of Social Sciences, Health, Aging and Society
Faculty of Social Sciences, Labour Studies
Faculty of Social Sciences, Political Science
Faculty of Social Sciences, Religious Studies
MacData Institute

We have recruited instructors for the Certificates of Completion that have both expertise and applied experience in the topics they wish to teach, and come from Anthropology, Social Work, Economics, and Health Research Methods, Evidence and Impact. We anticipate continuing to recruit instructors from a wide variety of disciplines and from the social sector itself. We are in early conversations with YWCA of Hamilton, facilitated by the Community Research Platform, to potentially co-develop and teach several Certificates of Completion.

We have an established partnership with Salvation Army of Hamilton, Lawson Ministries. They have agreed to pilot test some courses in the Certificates with their staff and provide extensive feedback. As we implement the Certificates, we will actively engage community organizations in helping us evolve the offerings as new opportunities and challenges emerge across the sector.

CONSISTENCY WITH MCMASTER'S MISSION AND ACADEMIC PLAN

McMaster's Strategic Mandate Agreement

The proposed Certificates of Completion align well with multiple priorities of the University. Particularly, we believe it can support the following priorities within the Strategic Mandate Agreement:

Multidisciplinary/interdisciplinary studies -
Spark, a centre for social research innovation is an interdisciplinary centre, and the individuals interested in teaching in our certificates come from highly varied backgrounds and disciplines. Given the exceptional diversity of the social sector, we see this diversity of perspective as critical to our mission and a central focus in our planning for implementation.

Math and statistics -
Our proposed curriculum is meant to offer a well-rounded skill set critical to effective, evidence-based decision-making in the social sector. This includes Certificates of Completion in cost-benefit analysis, numeracy, data cleaning, quantitative analysis of surveys, foundational statistics, and regression. We are deeply committed to helping students confidently apply basic quantitative analysis skills that are highly needed and valued within the sector.

Community/Local Impact of Student Enrolment -
While impact usually focuses on the economic value of the student population to the greater Hamilton region, we feel that intensive skill development offered to local and regional workers (and potential workers) in the social sector will also have a significant impact on the community as a whole. These skills lead to better decisions, and better decisions in this sector can have profound ripple effects. In this way, upgrading skills in the social sector can impact lives beyond improved work performance and employment opportunities.

Experiential Learning -
We have designed the curriculum so that within each course, there are opportunities to apply the learning within one's current work or volunteer activities.

Skills & Competencies -
One of the hallmarks of these Certificates of Completion is that they provide access to a range of learning opportunities focused on the building and demonstrating of specific social research skills. We believe this will position them well for career advancement.

McMaster's Institutional Priorities

Particularly, we believe the proposed Certificates of Completion can advance the following current priorities, based on McMaster's 2021-24 Institutional Priorities and Strategic Framework:

Inclusive Excellence -
Spark has committed as a Centre to being a place of inclusion and providing opportunities, research space, and learning resources to a wide range of individuals with different talents and needs. We have hired a communications associate with lived experience of neurodiversity to help us continuously expand and improve our inclusiveness. We will also be piloting one or more Certificate of Completion with employees of Salvation Army, including individuals with varied physical abilities, English as a second language, and limited or no college/university education. We are committed to actively embracing the challenges that emerge with diverse learner capacities and needs and finding solutions that can inform the ongoing development of these Certificates.

Teaching and Learning -
We are committed to adapting our teaching approaches to the needs of the students and organizations we work with. We will offer the Certificates of Completion as either all online, all in-person, or hybrid, rotating the format in response to student demand. Our approach will be informed by the pedagogical goals of the overall program, and any online delivery will include some synchronous components. In general, the Certificates of Completion will use readings, in-class exercises, practice assignments, and group projects, as appropriate.

Engaging Local, National, Indigenous and Global Communities -
Organizations across the social sector exist to benefit diverse communities at many different scales. We believe that this diversity in the student base will be a great opportunity for students to learn about other contexts and priorities. We also host through Spark a weekly virtual series where researchers introduce new methods or interesting applications. We have speakers from around the world, and plan to engage students in hearing from some of them who are doing work relevant to the sector or the student's individual interests and trajectory. We are also deeply committed to working with our Indigenous colleagues to appropriately support social research skill development in Indigenous-serving organizations, and awareness/effective engagement with Indigeneity in social sector efforts across contexts.

PROGRAM LEARNING OUTCOMES

Each Certificate of Completion will have specific learning objectives. Cumulatively, the Certificates of Completion address the following learning outcomes:

- Students will learn basic principles of research design and become familiar with a wide range of common approaches for identifying community assets and needs, developing interventions, and evaluating and improving effectiveness
- Students will develop competency and experience with basic methods of data collection for social research
- Students will develop competency and experience with analysis of evidence, including basic numeracy and statistical data analysis and qualitative analysis skills for social research
- Students will be familiar with all stages of the research process, including problem definition, data collection, data analysis, ethics, and oral and written communication, in the context of a program and organization

CONSISTENCY WITH DEGREE LEVEL EXPECTATIONS

Though Certificates of Completion are not normally aligned to specific degree level expectations according to the Policy, in the present case the courses and Certificates were designed with future development of academic microcredentials in mind. Therefore, the Certificate of Completions' learning outcomes are consistent with those for undergraduate learners. Regarding depth and breadth of knowledge, students completing the Certificates will have **general knowledge and understanding** of key concepts, methods, approaches and assumptions relevant for identifying community assets and needs, developing interventions, and evaluating and improving effectiveness. They will acquire skills necessary to gather, review, evaluate and interpret information and learn critical thinking and analytical skills. In addition, by having completed several Certificates of Completion in different types of data collection and analysis, students will also develop **knowledge of methodologies** that will help them evaluate the appropriateness of different methods of inquiry for different types of assets and needs assessments, program evaluations, or organizational change efforts. Students will also have opportunities to **apply their knowledge** and demonstrate that they can review, present, and interpret qualitative and

quantitative information to make sound judgements, evaluating different approaches for problem-based and evidence-based decision-making. As appropriate in the Certificates of Completion, students will produce both written and oral reports or assignments to develop and demonstrate their **communication skills**. The content in the Certificates of Completion is meant to be introductory and applied. Students will also be instructed in the **limitations of the methods or tools** taught in the program so that they know when they will need to seek additional expertise or training to address a particular problem. As a program designed with those working in the social sector in mind, the program content will stress **professional standards** of not only personal responsibility and collaboration but also principles of ethical applied research, integrity, and social responsibility.

DEMAND FOR PROGRAM

Evidence of Societal/Labour Market Need

Within the social sector, much has been written about the needs of the non-profit sector. The following evidence focuses on the non-profit sector as representative of the larger range of organizations within the social sector (including government agencies, not for profits, foundations and social enterprises). In 2017, non-profit organizations accounted for 8.5% of Canada's GDP totalling $169.2 billion (Statistics Canada, 2019). There were 2.5 million people employed in non-profit organizations in 2019, representing 13% of all jobs in Canada (Statistics Canada, 2021a). Of all provinces, Ontario has seen the largest increase in the creation of new jobs within the non-profit sector from 2010-2019 (Statistics Canada, 2021b). The majority of employees working in non-profit organizations in 2019 are college and university graduates (Statistics Canada, 2021a). The number of Indigenous and racialized persons working in the non-profit sector has risen since 2010 (0.9% and 6.1% points respectively) (Statistics Canada, 2021a). While Statistics Canada data suggests that the number of jobs in the non-profit sector has been increasing in 2021 (Statistics Canada, 2021b), other sources point to significant layoffs in the non-profit sector during the pandemic (CharityVillage, 2021; Mathieu, 2020). With a number of individuals in the non-profit sector unemployed or with significantly reduced hours, some of these individuals may be seeking upskilling or reskilling.

The Business Council of Canada (2020) surveyed 86 large private sector employers and found that one of the largest barriers to recruitment in the sector was finding candidates with the right technical skills. Employers were also asked about the top five areas where they anticipate a skills shortage in the next three years, and the most common area mentioned was in analytics, statistics and quantitative analysis. The importance of understanding data and statistics for employees working in the non-profit sector has become increasingly recognized (Fish, 2017). Meanwhile, non-profit organizations face significant expectations to demonstrate their "effectiveness, efficiency, and accountability" (Bozzo, 2002). Similarly, the Ontario Non-profit Network (ONN) has called on the sector to invest in evaluation work to improve accountability and advocate for those working within the sector to develop the skills to strategically use data, technology, and analysis in order to facilitate change (2017a; 2017b). However, many have noted the lack of human resources and the lack of evaluation skills of staff in non-profit organizations (Bozzo, 2002; Imagine Canada, 2019; ONN, 2017a). Thus, the sector needs employees with skills like program evaluation, research methodology, and communicating research in an easy-to-understand manner.

There is an increased value placed on micro-credential courses and certificates within the province of Ontario, as evidenced by the province of Ontario's announcement that they will be investing $59.5 million dollars between 2020-2023 to support micro-credit learning (Government of Ontario, 2021a). To accelerate the development of micro-credentials and expand program offerings, $15 million dollars was

made available to Ontario postsecondary institutions collaboratively working with local agencies and employers to support the development of new programs/courses or to expand existing micro-credentials (Government of Ontario, 2021).

The non-profit sector often pulls employees from a variety of educational and employment backgrounds; in such a rapidly changing and evolving sector, the opportunity to engage in obtaining micro-credentials or completing certificate programs with a targeted focus on skill development helps to offer a solution to gaps in knowledge that may exist within the field (OAS, 2021). Soft skills are particularly in demand in leadership positions in the non-profit sector. The ONN (2017b) developed a framework of the type of skills that leaders need in this sector. The skills taught through the proposed certificates directly contribute to competency in each identified role.
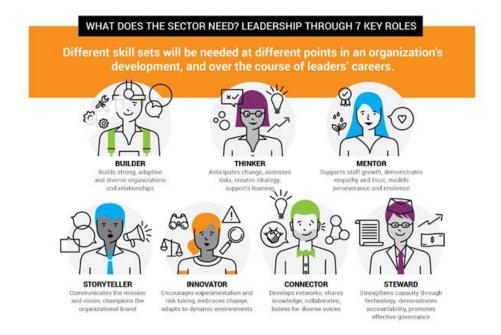

Figure 1: Leadership types and skills needed in the non-profit sector. Ontario Nonprofit Network, 2017.

Evidence of Student Demand

Initially, the proposed focus for marketing of these Certificates is organization to organization, offering them as professional development opportunities for an organization's employees, which explains our focus above on labour market demand. In our consultations, the need for this has been profoundly felt and expressed by organizational leadership. Many of the frontline employees we have worked with through Spark's applied research service have been very interested in learning once we began work together, but did not go into the experience knowing what they wanted from it. Potential learners are more likely to know that they would benefit from learning particular skills, like survey development, analysis of data, or program evaluation, rather than knowing that broad research capabilities would help them thrive in the sector.

Amongst the organizations we work with we have also seen an increase in peer-workers with lived experience similar to that of clients. Salvation Army, Banyan Community Services and Grenfell Ministries all have volunteer, contract or full-time employees with lived experiences similar to those of their clients. Many peer workers have limited formal training beyond high school or in the methods of social research that are the focus of our proposed program. In some instances, these volunteers and staff are

nonetheless expected to carry out data gathering or analysis in their current roles. Providing training that honors the understandings and wisdom they have gained through lived experience while expanding their toolkit is of significant interest to these organizations. Training individuals with a wide range of backgrounds and bases of knowledge has been an important part of the career of Allison Van, Spark's Executive Director, and we believe this makes us well positioned to engage in learning as a collaborative activity with a wide range of learners.

Beyond the local not for profit sector, we have been privy to significant interest expressed in the Master of Arts in Public Policy in Digital Society (Spark team members teach their Research Methods course and three skills labs in Data Analysis) by local, provincial and federal government officials about their need for quality training for their staff, targeted to the sector and focused on application. Additionally, Florent Lefevre-Schlick, who creates and runs external certificates for the Faculty of Engineering has actively supported our development in part because he believes that many of the innovative firms that he works with that are embarking on major environmental initiatives would also want to learn what we propose to teach.

JUSTIFIABLE DUPLICATION

Currently there are no comparable programs offered at Ontario universities or colleges that resemble the proposed Certificates of Completion. There are two certificate programs offered at the university level (McMaster University and University of Alberta) that are designed for currently enrolled undergraduate students and require students to take existing statistics/research methods course to fulfill the course requirements for the program. However, we would argue that these courses do not provide the specific skills in applied research and evaluation required in the non-profit job market. University of Western Ontario has a Master of Arts in Research for Policy and Evaluation that is most similar to our effort, but it is a graduate degree. The features that differentiate our program are that ours is at the undergraduate level, allowing a wider array of learners to access it, and individuals do not need to commit upfront to a year-long program but can build skills over time. There are programs that focus solely on the non-profit sector, particularly on leadership and management (Ryerson University, Seneca College, Mohawk College). While Ryerson offers a course-based program that provides flexibility, it (along with Mohawk and Seneca College) does not offer the applied research element that we are proposing.

The college programs (Fanshawe, Conestoga, Humber) offer generic courses on statistics/research methodology as part of their programs. Some offer specific courses on project management and program evaluation. The design of these programs also requires commitment to the entire program on a full or part-time basis, without the possibility of completing only some course or parts of the program. The courses are also usually designed as 3-unit or similar sized instructional credits, limiting the flexibility in delivery for students who may also be working.

DEGREE NOMENCLATURE

We are proposing three Certificates of Completion at this time. We plan to allow those without undergraduate degrees (but with significant sector experience) to enrol in the program - including peer workers with lived experience. We feel it is critical to be inclusive of the range of those working in the social sector. When new policy is in place for microcredentials, we plan to consider how these courses and Certificates align with the new framework.

2. ADMISSION & ENROLMENT

ADMISSION REQUIREMENTS

To be eligible to complete any Certificate of Completion, it will be **recommended** that learners have an Ontario high school degree (or its equivalent) or meet the definition of a mature student.

We will **recommend** that those enrolling in our program(s) have either a 3 year Bachelors degree or 3 years of work experience in the social sector. Most of those employed in the sector will have that level of existing experience or credentialing.

Students without a high school diploma (or its equivalent) or a post-secondary degree from an institution where the primary language of instruction is not English will be expected to demonstrate language competency consistent with McMaster undergraduate admissions.

Enrollment in the Certificates of Completion are not part of the IQAP or provincial enrollment allocations.

ENROLMENT PLANNING AND ALLOCATIONS

We will introduce 3-4 new courses gradually over the next three to four years. The proposed courses will each have 15 contact hours and are grouped into 3 thematic foci for the Certificates of Completion. Learners will need to complete 2 courses to earn one Certificate of Completion (15 x 2 = 30 contact hours):

1. Organizational learning & program evaluation (successfully complete any 2 of the following courses):

- Assessing Strengths and Needs in Communities
- Incorporating Evidence into Strategy
- Impact Evaluation
- Cost-Benefit Analysis in the Social Sector

2. Qualitative data collection & analysis (successfully complete any 2 of the following courses):

- Interviewing and Focus Groups
- Applied Ethnography
- Trauma-informed Data Collection
- Analyzing Qualitative Data
- Qualitative Data Analysis (QDA) using NVivo

3. Quantitative data collection & analysis (successfully complete any 2 of the following courses):

- Survey design and analysis
- Numeracy and descriptive statistics
- Foundational Statistics
- Regression
- One of either,
  - Data Wrangling, or
  - Data Visualization

We plan to offer 3-4 new courses each year and expect all courses to be regularly available by the end of 2025-26. We expect enrolments of between 10-30 per course.

We would like to note that giving learners this type of flexibility in choosing among a range of short courses to plan their Certificate of Completion is an established approach used by McMaster Continuing Education for the following 3 Certificates of Completion:
- Certificate of Completion in Academic Writing (complete 2 out of 4 courses)
- Health Analytics Certificate of Completion (complete 3 out of 5 courses)
- Essentials Certificate of Completion (complete 5 days of coursework from extensive list)

Projected total Certificates of Completion enrolment:

Academic Year	# Courses	Cohort Year 1	Cohort Year 2	Cohort Year 3	Cohort Year 4	Total Enrolment	Maturity
2022-23	3	Will assume 3 courses with 20 students each				**60**	
2023-24	6	New courses – will assume 60	New enrolment in previous courses– 60			**120**	
2024-2025	9	New courses – 60	New enrolment in 2023-24 courses - 60	New enrolment in 2022-23 courses - 60		**180**	
2025-2026	13	New courses – 80 – 4 new courses with 20 students per course	New enrolment in 2024-25 courses - 60	New enrolment in 2023-24 courses - 60	New enrolment in 2022-23 courses - 60	**260**	**260**

Figure 3: Projected enrolment in individual courses toward Certificates of Completion

3. STRUCTURE

1. ADMINISTRATIVE, GOVERNANCE AND COMMUNICATION

Administrative
The existing administrative infrastructure of *Spark: a centre for social research innovation* will support each course and Certificate of Completion. This includes a full-time Executive Director, actively engaged Academic Director, full-time administrator, 3 part-time staff and several students. Rigorous methodological training has been a priority for Spark since its founding and so the center's infrastructure has been built with the intention of being able to manage such a program. Some aspects of the Centre's administration (budgeting/finance, human resources, and some communications) are provided by the Faculty of Social Sciences Dean's Office.

With sufficient enrolment, we intend to hire for part-time additional program administration and administrative support – individuals to help with managing student needs, marketing, coordination of the Certificates, and faculty support. We expect that the Inspire Office of Institutional Learning (once established) will be able support some aspects of our program.

Governance

As a Senate-approved Centre, *Spark* reports to a Governing Board, which is Chaired by the Dean of the Faculty of Social Sciences, Dr. Jeremiah Hurley, who is also Professor and former Chair in Economics. Other Board Members include Dr. James Dunn (Professor and Chair of Health, Aging & Society and Senator William McMaster Chair in Urban Health Equity), Dr. Tina Fetner (Professor and Chair of Sociology), and Dr. James Gillett (Associate Professor in Health Aging & Society and Associate Dean Research and Graduate Studies, Social Sciences). Drs. Hurley and Fetner chaired the original working group that developed the core vision for the Centre, and Dr. Dunn was a member. The Academic Director and Executive Director of *Spark* will hold direct responsibility for the development and implementation of the Certificates of Completion.

Communications

Spark has an existing communications team of staff and students that manage our website, social media, events, video, accessibility, and development of new materials. In addition to faculty, staff and students at McMaster, we have many professionals in the community who have joined our mailing list or attended events. Additional communications support will come from the Dean's Office in the Faulty of Social Sciences.

Spark relies on several channels to communicate information, promote its message and provide services. We have a biweekly newsletter with 1,000-2,000 regular readers. We have an actively managed website and a presence on both Twitter and LinkedIn. Additionally, we host weekly talks, called Spark Talks, to share the work of researchers around the world who are innovating methods or doing highly socially relevant research. We get audiences of 10-25 attending the virtual talks, and more using our video library which now has over 75 talks available.

Additionally, we host a Social Research Innovation workshop series annually, organized around a central theme and bringing in innovative researchers to teach skills workshops related to the theme. In 2019-2020, we focused on Transparency in Research, 2020-2021 (in collaboration with the Sherman Centre) was about producing Relevant Research to impact policy and practice, and 2021-22's Identity in Research is focused on how nuances of identity can be explored in research.

Spark also offers Research Conversations, an opportunity for any researcher in or outside McMaster to get 4 hours of free help with any social research design or methodology challenge. Since beginning the service in February 2021, we have held over 40 conversations with faculty, students, staff, and community members.

These outreach and communications vehicles, Spark's direct work and reputation with community organizations through our applied research service, and our active engagement with Office of Community Engagement, the Community Research Platform and other community-engaged units, allows Spark to be confident that we have a strong communications base from which to launch the proposed Certificates of Completion.

2. STRUCTURE AND REGULATION

Individual Certificates of will be awarded to those that successfully complete two courses within the Certificate of Completion with at least a C average. We may revise or introduce new courses or Certificates of Completion over time as needs and research methods in the sector evolve. By introducing the Certificates of Completion gradually, we will also have an opportunity to learn and adapt our delivery in response to demand.

Below is a list of the courses included in the 3 Certificates of Completion, with short calendar descriptions for each.

1. Organizational learning & program evaluation—An overview of analytical perspectives on organizational change and evaluation in the social and non-profit sector.:

1. Assessing Strengths and Needs in Communities – An introduction to approaches and methods used for understanding the diversity and range of community assets and needs.
2. Incorporating Evidence into Strategy – An introduction to the decision-making process and how to effectively incorporate evidence into planning for an organization or program.
3. Impact Evaluation – An overview of core principles and approaches used to evaluate the impact of programs and policies.
4. Cost-Benefit Analysis in the Social Sector – An introduction to how to consider alternative uses of funds and calculate the relative value of different means of addressing social concerns.

2. Qualitative data collection & analysis—An introduction to the methods for effectively collecting and analyzing social data:
1. Interviewing and Focus Groups – An introduction to key strategies and methods for collecting data via interviews and focus groups.
2. Applied Ethnography – An introduction to the use of participant observation and related methods in applied settings.
3. Trauma-informed Data Collection (focus on arts based) - An introduction to arts-based and related methods that expand the range of what has been traditionally considered data.
4. Analyzing Qualitative Data – An introduction to key methods used to analyze qualitative data, such as policy documents and interview or focus group transcripts.
5. Qualitative Data Analysis (QDA) using NVivo—An introduction of how to transfer principles of qualitative data analysis using NVivo

3. Quantitative data collection & analysis—An introduction to the methods for effectively collecting and analyzing social data:
1. Survey design and analysis – An introduction to best practices for designing survey questions and overall survey structure for applied research settings.
2. Numeracy & descriptive statistics – An introduction to foundational concepts in the consumption and presentation of quantitative data, including descriptive statistics
3. Foundational Statistics – An introduction to foundational concepts in probability and statistics for applied analysis of quantitative data
4. Regression – An introduction to regression-based methods of data analysis to answer applied research questions
5. Data Wrangling—Hands-on instruction in data cleaning and presentation of descriptive statistics using common software tools
6. Data Visualization—Hands-on instruction in creating effective data illustrations using common software tools

Note: Learners can only count *either* Data Wrangling *or* Data Visualization toward the Certificate of Completion.

4. CURRICULUM AND TEACHING

1. PROGRAM CONTENT

The Certificates of Completion will engage a variety of instructors with diverse backgrounds, disciplines, and research perspectives. Our faculty, staff, and partners have extensive applied research and/or teaching experience that we will use to continuously inform the development of these courses. The teaching staff so far identified have experience applying their research skills, making them informed mentors for students who are interested in applying research skills in the workforce. As a Centre, Spark has a broad mandate to stay actively informed about methodological developments across social research and works within the community on applied research projects. Through Spark, Certificate students will have access to our Spark Talks and Innovations in Research workshop series, where we actively engage researchers around the world to share their research about methodological innovation and/or applying innovative methods to social issues or questions.

2. PROGRAM INNOVATION

Students will have ample opportunities throughout the program to apply and develop their analytical skills through problem-based and case-based learning in the courses for these Certificates of Completion. The availability of accessibility accommodations will be made clear in all recruitment materials and Certificate outlines. Teaching instructors and staff will have training and support to ensure they can accommodate a range of student needs, including physical and mental health challenges. Additionally, throughout the program we aim to engage with students with lived experience of disabilities to help us continuously expand our capacity for accessibility.

3. MODE(S) OF DELIVERY

The courses will use a combination of in-person and synchronous online formats, according to student demand. In our recent experience, in-person learning is often preferred, particularly for the informal connections that students and instructors are able to make in the classroom. However, we've also learned that synchronous online formats (via Zoom) are often effective when students are geographically dispersed. Therefore, we will offer in-person training for the local, Hamilton-based market, when organizations express a preference and there is sufficient local individual demand. However, we recognize that to be sustainable and reach potential students who may not be in Hamilton, we will need to offer online synchronous courses. As the program develops, we plan to offer the more popular courses in both formats over the course of a given academic year. In addition, we expect that most courses will be offered in the evening or on weekends, including during the summer months. By offering courses in flexible formats and potentially more than once a year, working students may be more likely to complete Certificates at a time suitable for their schedule.

All Certificate course outlines will include accessibility statements, and all instructional materials will be provided in accessible formats. Instructors will support students with appropriate accommodations (e.g., CART services, transcription in virtual meetings, other software supports) as needed.

4. EXPERIENTIAL LEARNING

Each course in the Certificates of Completion will include assignments for students to apply their learning to sample cases or datasets or to problems or issues in their current organization. The aim of these assignments is to encourage existing employed students to engage with the skills at work.

Through group discussion, students will have the opportunity to establish good work practices through feedback from instructors and peers.

5. ACCESSIBILITY & INCLUSION

These three Certificates of Completion aim to celebrate the talents and insights that all students bring forward and to be an accessible, safe and welcoming environment. In our course development, we partnered with students from the Student Partner's Program (SPP) in the MacPherson Institute. The Student Partners Program (SPP) provides undergraduate and graduate students with opportunities to participate as partners with faculty, instructors and staff on projects that contribute to the enhancement of teaching and learning at McMaster. This partnership allowed us to be proactive by building content with diverse student populations to make it more learner focused. Additionally, we are piloting with partners, beginning with the Salvation Army, who actively work with marginalized populations in local communities and have staff with lived experience of various forms of social marginalization or minimization. During the pilot, Salvation Army employees will be students in the program, and actively engaged in providing feedback to improve the design to be relevant and useful for potential students. We are in discussions with several other organizations that may wish to help us pilot test the curriculum.

Spark is mindful of the fact that people come from unequal starting places, and we work toward actively addressing different barriers to higher education. We are teaching applied research skills in ways that are highly informed by a recognition that there are deep structural inequalities that profoundly impact people's lives, experiences, and sense of safety in educational contexts. The skills we teach emphasize that understanding the role of the diversity and complexity of lived experience is central to effective research. Some examples of our focus include meaningful dis-aggregation of data, outlier analysis, and participatory action research. We understand the importance of reflecting the diversity of our community in the Certificate offerings. We are committed to fully embracing multiple, sometimes critical, perspectives to allow for increased creativity, innovation, and leadership.

Spark's leadership has made a major commitment to ensure that we are promoting diversity in the research enterprise and within our ranks. In our hiring process, we actively promote openings within networks of racialized, newcomer and disabled job seekers, and ensure that everyone who would actively work with a candidate has the opportunity to share their unique perspective and inform hiring. We are also consistently improving our ability to address implicit bias in the workplace by actively learning and growing to counter-act it. Our commitment to being proactive also involves asking people about their accessibility needs, creating a space and culture where dissent is not only tolerated but appreciated and people need not worry that their lived experiences will be challenged, centering diverse perspectives in the teaching process, and teaching research methods that honour the wide range of human experiences and identities.

Spark leadership and staff recognize the complexity of intersectionality and how different aspects of one's identity can play a role in shaping perspective within different contexts. In our speaker series, we actively recruit researchers from marginalized communities to share their work. Given the size of cohorts, we are not planning to build specific supports for students of colour. However, in our experience, processes for accommodation, support, safe discussion, and diversity of teachers supports students of colour (and all other students). Through anonymous feedback forms, we will have an honest mid-term survey to assess how students feel about the level of inclusivity, academic rigour, and

guidance provided in our curriculum. In our classroom conversation and dialogue we will also ensure that everyone has an opportunity to speak, and everyone is obliged to listen. Our aim is to foster a managed space where everyone has a voice and feels heard. Elsewhere (above), we have addressed how we will address removing barriers to learning for students with disabilities, who may need a range of accommodations, from alternative formats of learning materials, to technology supports, or even just more time to complete some program requirements.

We will communicate and demonstrate our commitment to diversity and inclusion through our recruitment of program staff, including instructors, as well as clear information in our recruitment and educational materials about the availability of resources and accommodations for a range of learners.

6. RESEARCH REQUIREMENTS (IF APPLICABLE)
Not applicable.

5. ASSESSMENT OF LEARNING

METHODS FOR ASSESSING STUDENTS
As explained above, the three Certificates of Completion include 3 types of academic content and/or analysis, and courses within each of these groups will share similar assessment methods.

Certificates of Completion & list of courses	Typical assessment strategies
Organizational learning & program evaluation • Assessing Strengths and Needs in Communities • Incorporating Evidence into Strategy • Impact Evaluation • Cost-Benefit Analysis in the Social Sector	• Group presentations analyzing cases/problems from curriculum • Problem sets requiring analysis of course cases • Written reflections responding to prompts about course cases/problems • Written reflections on work-related evidence relevant to course content
Qualitative data collection & analysis • Interviewing and Focus Groups • Applied Ethnography • Trauma-informed Data Collection • Analyzing Qualitative Data • Qualitative Data Analysis (QDA) using NVivo	• Short written assignments applying relevant skills (e.g., developing an interview guide, coding a sample interview transcript) • In-class practice and role playing to apply skills (e.g., mock interviews, focus group facilitation) • Written reflections responding to prompts about course cases/problems • Short in-class, individual or group presentations of case/problem results
Quantitative data collection & analysis • Survey design and analysis • Numeracy & descriptive statistics • Foundational Statistics • Regression • Data Wrangling • Data Visualization	• Problem sets or short exams • Written reports explaining quantitative results • Short individual or group in-class presentations of case/problem results

Figure 5: Assessment methods by course type

Because the Certificates of Completion are meant for those currently working in the social sector who want to improve their applied research and analysis skills, the assessments will focus on students demonstrating competency through a mix of assessment methods, with an emphasis on the types of writing and oral presentation skills that are central to work in the sector. These assessments are designed to evaluate both domain-specific knowledge or understanding and professional communication (writing, presenting) skills most relevant for these students and their current or future work. In addition, in most courses, assessment will include a group-based component, so that students can develop their collaboration and collective problem-solving skills as well. For example, students may be asked to discuss or work on a case study or problem together in class, but then prepare an individual reflection or analysis to assess their individual learning. Focusing on assessing students' competency in the practical application of the theoretical approaches and methodological skills that are the focus of the Certificates align with the Program Learning Objectives, which focus on familiarity with and competency in basic methods and approaches related the applied social research in social sector settings. To support student accessibility, we will use a mix of assessment types to ensure that learners with different strengths and backgrounds will be able to demonstrate their mastery of the core skills.

CURRICULUM MAP

Program Learning Outcomes	Associated DLEs	Level	Assessments	Courses
Students will learn basic principles of research design and become familiar with a wide range of common approaches for evaluating community needs and program effectiveness	• general knowledge and understanding of key concepts, methods, approaches and assumptions relevant for applied research • develop knowledge of methodologies that will help them evaluate the appropriateness of different methods of inquiry for different types of needs assessments, program evaluations, or organizational change studies • to apply their knowledge and demonstrate that they can review, present, and interpret qualitative and quantitative information to make sound judgements and evaluate different approaches for problem-based and evidence-based decision-making • understand the limitations of the methods or tools taught in the program so that they know when they will need to seek additional expertise or training to address a particular problem	basic	• Group presentations analyzing cases/problems from curriculum • Problem sets requiring analysis of course cases • Written reflections responding to prompts about course cases/problems • Written reflections on work-related evidence relevant to course content	• Assessing Strengths and Needs in Communities • Incorporating Evidence into Strategy • Impact Evaluation • Cost-Benefit Analysis in the Social Sector
Students will develop competency and experience with basic methods of	6. general knowledge and understanding of key concepts, methods, approaches and assumptions relevant for applied research	basic	• Short written assignments applying relevant skills (e.g., developing an interview guide, coding a sample interview transcript)	• Interviewing and Focus Groups • Applied Ethnography • Trauma-informed Data Collection

data collection for social research	7. develop knowledge of methodologies that will help them evaluate the appropriateness of different methods of inquiry for different types of needs assessments, program evaluations, or organizational change studies 8. to apply their knowledge and demonstrate that they can review, present, and interpret qualitative and quantitative information to make sound judgements and evaluate different approaches for problem-based and evidence-based decision-making 9. understand the limitations of the methods or tools taught in the program so that they know when they will need to seek additional expertise or training to address a particular problem		• In-class practice and role playing to apply skills (e.g., mock interviews, focus group facilitation) • Written reflections responding to prompts about course cases/problems • Short in-class, individual or group presentations of case/problem results • Problem sets or exams • Written reports explaining quantitative results • Short individual or group in-class presentations of case/problem results	• Analyzing Qualitative Data • Qualitative Data Analysis (QDA) using NVivo • Survey design and analysis • Numeracy & descriptive statistics • Foundational Statistics • Regression • Data Wrangling • Data visualization
Students will develop competency and experience with analysis of evidence, including basic numeracy and statistical data analysis and qualitative analysis skills for social research	• general knowledge and understanding of key concepts, methods, approaches and assumptions relevant for applied research • develop knowledge of methodologies that will help them evaluate the appropriateness of different methods of inquiry for different types of needs assessments, program evaluations, or organizational change studies	basic	• Short written assignments applying relevant skills (e.g., developing an interview guide, coding a sample interview transcript) • In-class practice and role playing to apply skills (e.g., mock interviews, focus group facilitation) • Written reflections responding to prompts about course cases/problems • Short in-class, individual or group presentations of case/problem results • Problem sets or exams • Written reports explaining quantitative results	• Interviewing and Focus Groups • Applied Ethnography • Trauma-informed Data Collection • Analyzing Qualitative Data • Survey design and analysis • Numeracy • Data cleaning and descriptive statistics

	• to apply their knowledge and demonstrate that they can review, present, and interpret qualitative and quantitative information to make sound judgements and evaluate different approaches for problem-based and evidence-based decision-making • understand the limitations of the methods or tools taught in the program so that they know when they will need to seek additional expertise or training to address a particular problem		• Short individual or group in-class presentations of case/problem results	• Foundational Statistics • Regression
Student will be familiar with all stages of the research process, including problem definition, data collection, data analysis, ethics, and oral and written communication, in a social organization	• general knowledge and understanding of key concepts, methods, approaches and assumptions relevant for applied research • understand the limitations of the methods or tools taught in the program so that they know when they will need to seek additional expertise or training to address a particular problem • to develop and demonstrate their communication skills	basic	• Group presentations analyzing cases/problems from curriculum • Problem sets requiring analysis of course cases • Written reflections responding to prompts about course cases/problems • Written reflections on work-related evidence relevant to course content	• Assessing Strengths and Needs in Communities • Incorporating Evidence into Strategy • Impact Evaluation • Cost-Benefit Analysis in the Social Sector

Figure 6: Curriculum Map

DEMONSTRATING STUDENT ACHIEVEMENT

For this program, success will be evident if students are able to effectively apply what they have learned to help their organizations and/or future employers develop, administer, and evaluate their social programs or similar activities. Organizations that sponsor their employee participation in the courses and Certificates of Completion should see improved capacity within their organization to collect and analyze evidence to further the organization's core missions.

Overall, assessment of student achievement will be through completing courses in the Certificates of Completion with at least a C average. Within the program, assessment will focus on practical applications of theory and methods to address research questions common in the social sector. Organizations will be able to assess the value of the training through the ways the project informs the organization's future work and goals.

6. RESOURCES

1. UNDERGRADUATE PROGRAMS

ADMINISTRATIVE, PHYSICAL AND FINANCIAL RESOURCES

We believe these Certificates have the potential to significantly advance *Spark's* mission. Because of this, we are committed to investing the necessary human, physical and financial resources necessary. Financial projections lead us to anticipate that we can grow the Certificates appropriately to be cost-neutral without additional funding by the fourth year. We have applied and will continue to apply for funding to support curriculum development and piloting of individual Certificates of Completion in the first three years of operations.

LIBRARY, TECHNOLOGY, AND LABORATORY RESOURCES

It is our understanding that many centrally provided services are not broadly made available to individuals external to McMaster enrolled in individual certificates. We have approached our planning without an assumption that such services will be available.

FACULTY

In identifying potential course instructors, we focused on recruiting individuals at McMaster that have strong methodological expertise but also direct experience working on applied policy and practice questions in the community. All instructors in the program will receive support and active feedback from Spark's Academic Director, Dr. Michelle Dion, and Executive Director, Allison Van. Dr. Dion has over a decade of experience teaching a range of methodologies. Ms. Van has led initiatives in government and not for profits and both led herself and trained others in providing applied adult education.

Our initial budget and planning assumes we will hire instructors on a temporary basis, including instructors with research expertise who are currently working in the sector. We also anticipate that employees of *Spark*, including our SEAL lab manager and research staff who work on Spark's applied/contract research projects, and other research units of campus may teach relevant courses in the Certificates.

ANTICIPATED CLASS SIZE

We expect to set a minimum of 10 students for each course and cap most at 30. We expect high interest in some of our quantitative methods classes, particularly numeracy, and may be able to have larger enrolment than 30 students in these courses without compromising quality.

PROGRAM IMPLEMENTATION

We plan to begin offering the program in stages, with 3-4 new courses offered each academic year, starting in Fall 2022. By 2025-26, we plan to offer the full complement of courses for the Certificates of Completion within a single year. By introducing new courses in small batches each year, we will better manage quality and control upfront costs.

7. QUALITY AND OTHER INDICATORS

QUALITY OF THE PROGRAM

To evaluate the quality of the program, we will consider:

- Whether partner organizations continue their partnership and/or sponsor future cohorts/new employees to participate in the program
- End of program student satisfaction surveys
- Percentage of students working in the social sector who take more than one Certificate of Completion

INTELLECTUAL QUALITY OF THE STUDENT EXPERIENCE

Because we anticipate having a small number of faculty who teach more than one course, students will have multiple opportunities to study with the same instructor, leading to more sustained interaction. The Academic Director of *Spark* has significant post-secondary teaching experience, including in extracurricular workshops on research methods for motivated interdisciplinary groups of students. The Executive Director for the program has significant experience supervising teams of student researchers/learners in applied research projects and working with community organizations to achieve their organizational objectives. We have also identified faculty members who have experience collaborating on applied research projects, including with non-profit organizations, and who have teaching experience in post-secondary institutions.

APPENDIX 1 – Citations

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APPENDIX 2 – Alignment with McMaster's Certificate Policy

The following comments address points 45-56 of McMaster's Certificates-Diplomas policy:

CERTIFICATES OF COMPLETION

45. *Though these Certificates of Completion will involve student assessment of academic content, they will be marketed as individual learning experiences.*

46. *These Certificates of Completion will include a minimum of **30 contact hours** and **evaluation** of the learner's learning. Given the need for student reflection and completion of assignments, our courses will normally span more than one week of student contact.*

47. *We have included detailed plans for assessment in this proposal and will record letter grades on the McMaster scale for all learners who complete a course. A minimum of a C will be required to count toward a Certificate of Completion.*

48. *These Certificates are intended as a professional development opportunity primarily for those currently working in the social sector, and we have established recommended and minimum enrolment requirements consistent with the level of proficiency with basic skills necessary to effectively complete the courses.*

ADMISSION REQUIREMENTS

49. *Though there are* normally *no specific admission requirements for Certificates of Completion, for the reasons outlined above, and given the content of the Certificates, we are recommended that those who enroll have the equivalent of a high school diploma or meet McMaster's criteria for adult learners with 3 years working experience in the sector.*

CREDIT TOWARD ANOTHER CREDENTIAL

50. *Our courses are designed for the Certificates of Completion proposed above. We anticipate aligning our offerings with future revisions in the policy, including a new framework for microcredentials at McMaster.*

51. *We do not plan to offer any Certificates of Attendance related to these courses*.

APPROVAL CRITERIA

52. *Because we will be charging fees (see 53. below), we understand that we must submit this proposal for the three Certificates of Completion to the Certificates and Diplomas Committee and then for consideration by the Undergraduate Council. We will submit updates if and when we plan to change or add to courses, as required by this point in the policy*.

53. *Please see the attached memo for the Fees Committee related to this point in the policy.*

54. *We believe these Certificates of Completion align both with the mission of Spark as well as McMaster's commitment to community-engaged research and collaboration with community organizations, as explained throughout this proposal.*

GUIDELINES AND LIMITATIONS

55. *Clarity and the protection of the McMaster certificate brand will be carefully considered, and no courses will be advertised without using the full term "Certificate of Completion," as expected by the policy.*

56. *Our marketing materials and course descriptions will include the non-credit status of the course, that there will be learner evaluation, how the learner shall be graded (i.e., a letter grade), and that a "Certificate of Completion" will be awarded for successful completion of 2 courses within the Certificate with at least a C average.*