



TERMS OF REFERENCE

The Mastercard Foundation Scholars Program at the African Institute for Mathematical Sciences Final Evaluation and Phase II Program Design

1. Background

1.1. African Institute for Mathematical Sciences (AIMS)

Established in 2003 in Cape Town, South Africa, AIMS is a pan-African network of centres of excellence offering postgraduate education, research, and public engagement for the advancement of Science, Technology, Engineering and Mathematics (STEM) in Africa. AIMS recruits Africa's most talented university graduates to pursue a one-year fully funded Master's in Mathematical Sciences in a highly interactive and culturally diverse learning environment. AIMS attracts world-class lecturers and research fellows on a volunteer basis to further improve the learning experience for students. Building on the success of its first centre in South Africa, the AIMS model was rolled out across Africa with new centres of excellence established in Senegal (2011), Ghana (2012), Cameroon (2013), Tanzania (2014), and Rwanda (2016).

1.2. The Mastercard Foundation Scholars Program

The Mastercard Foundation Scholars Program is a \$1.2 billion initiative to develop Africa's next generation of leaders. The program allows students whose talent and promise exceed their financial resources to complete their education. With a vision that education is a catalyst for social and economic change, the program focuses on developing leaders who are transformative, encouraging them to be active contributors in their communities. The Scholars Program provides financial, social, and academic support to Scholars through a global network of over 30 universities and secondary schools, committed to ensuring that all young people have an equal opportunity to obtain a quality education and pursue their aspirations.

1.3. The Mastercard Foundation Scholars Program at the African Institute of Mathematical Sciences

The Mastercard Foundation Scholars Program at AIMS was launched in November 2014 – a \$25 million, six-year program to support postgraduate training in mathematical sciences for economically disadvantaged but academically talented young people in Africa who demonstrate a commitment to give back to their communities, with a focus on women. The Mastercard Foundation Scholars Program at AIMS has three inter-related program areas:

Program Area 1: Advanced training for employment

The Mastercard Foundation Scholars Program at AIMS provides fully funded bursaries for eligible African youth to pursue a one-year Master's in Mathematical Sciences at any of the five AIMS centres or the 18-month Co-op Master's in Mathematical Sciences at AIMS Senegal, Cameroon or Rwanda. Mastercard Foundation Scholars at AIMS represent a cross-section of African youth including women and men from rural and urban areas and various socio-economic, cultural and religious backgrounds. Mastercard Foundation Scholars account for 30% of the students in the AIMS Master's in Mathematical Sciences program at each of the five AIMS centres, which translates to approximately 75 Scholars per academic year in total. This program area seeks to:

- a) Provide a bridge to support the transition of graduates to careers in STEM through the co-operative education pilot program;
- b) Increase the human capital in STEM in Africa; and

- c) Build a network of trained and motivated graduates with technical expertise in mathematical sciences and leadership skills, ready to join the workforce and tackle the development challenges of Africa.

Program Area 2: Improved quality of mathematics education

The Mastercard Foundation Scholars program at AIMS piloted a teacher training initiative in Cameroon in partnership with three Higher Teacher Training Colleges and the Government of Cameroon. Using a “train-the-trainer” model, the teacher training initiative seeks to improve the teaching and learning of mathematics in secondary schools across Cameroon. Through this model, 89 master trainers will be provided with the relevant skills and knowledge to train 3,120 mathematics teachers responsible for 1.7 million students. As a result, the teacher training initiative aims to increase the transition rates of students choosing to pursue post-secondary education in STEM, with a particular focus on girls, thereby building a pipeline of potential scholars for Program Area 1.

Program Area 3: Global coordination and advancement of STEM for development

The Mastercard Foundation Scholars Program at AIMS provides institutional support to AIMS more broadly, namely in communications, public engagement, partnership building, gender mainstreaming, monitoring & evaluation, and engaging in policy dialogue for increased investment in STEM education.

2. Purpose of the Assignment

AIMS is seeking an external team of consultants or firm to undertake a final evaluation of the Mastercard Foundation Scholars Program at AIMS and to develop the program design for a potential second phase.

The key objectives of the assignment are to:

- 1) Assess the results achieved by the Scholars Program at AIMS
- 2) Document the evidence of impact of the Scholars Program at AIMS
- 3) Develop the program design for a potential second phase of the Scholars Program at AIMS.

3. Evaluation and Program Design Questions

The final evaluation of the Mastercard Foundation Scholars Program at AIMS seeks to answer the four universal M&E questions: Did the Scholars Program do the right things? Did it do what it said it would do? Did it do it well? And what difference did it make? The insight and evidence generated through this process is expected to inform the development of the program design for a potential second phase of the Scholars Program at AIMS. The key questions to be addressed in the assignment are further elaborated below:

1. Did the Scholars Program do the right things?

- To what extent did the Scholars Program address the priorities of AIMS and the needs of its beneficiaries?

- To what extent did the Scholars Program address the development needs of Africa, specifically in terms of increasing the human capital in STEM and employment of African youth?

2. Did the Scholars Program do what it said it would do?

- To what extent were the intended objectives achieved?
- To what extent were the intended outputs attained?

3. Did it do it well?

- How effectively was the program managed?
- How adequate were the monitoring & evaluation mechanisms?
- How appropriate were the program delivery modalities?

4. What difference did the Scholars Program make?

- To what extent has the Scholars Program produced change and what were the key contributing factors?
- What was the specific impact of the Program on the Scholars themselves? What has been the trajectory of Scholars post-AIMS and what influence did the Program have on this?
- What institutional change at AIMS, if any, was provoked by the Scholars Program?

5. Considering the findings above, what should a second phase of the Scholars Program at AIMS look like?

- What is the evidence of need and rationale for a proposed second phase?
- What are the recommended objectives, outcomes, and outputs for a second phase?
- What should the key areas of focus and activities be?
- How does the proposed program design for a second phase align with the 2020-2025 AIMS Strategic Plan and the Mastercard Foundation Young Africa Works Strategy and the objectives of the Scholars Program?
- Which external partners should AIMS engage with to deliver on the proposed second phase of the Scholars Program?
- What capacity is needed across AIMS to effectively manage and implement the proposed second phase of the Scholars Program?
- What is the comparative advantage of AIMS to undertake this?
- What is the proposed budget, modalities of delivery, and governance/program management requirements?

Given the shared priority of AIMS and the Mastercard Foundation Scholars Program in increasing young women’s access to higher education in STEM, a gender-sensitive lens should be applied to both the evaluation and the design of the proposed second phase.

4. Scope of the Assignment

The final evaluation will focus exclusively on the Mastercard Foundation Scholars Program at AIMS and its three program areas from its inception in 2014 to present. The program design for Phase II of the Scholars Program must remain cognizant of the broader context of the AIMS network within which it will be delivered.

5. Approach and Methodology

The final evaluation of the Scholars Program at AIMS will require a variety of data collection and analysis tools and methodologies for both qualitative and quantitative data to ensure a comprehensive evaluation exercise. This could include, but is not limited to, basic data collection tools such as interviews, focus group discussions, observation, surveys, and secondary data and information sources. More complex and participatory methodologies could include the Most Significant Change technique, contribution analysis, and tracer studies. In the analysis of the data and information collected from various sources, *triangulation* will be important to ensure reliability and credibility. AIMS envisages the following key phases to the assignment:

- a) **Desk research** to better understand and contextualize AIMS and the Mastercard Foundation Scholars Program. All relevant data and documents will be shared with the selected consultant(s)/firm, including the Scholars Program proposal, annual work plans and budgets, theory of change, baseline survey report, mid-term evaluation report, impact report, Scholars database (current students and past alumni), partnership agreements, performance measurement framework, biannual progress reports, and financial forecasts, as well as AIMS Annual Reports (narrative and financial), 2020-2025 AIMS Strategic Plan, and other relevant strategic documents.
- b) **Data collection** – This could include, but is not limited to, interviews, focus group sessions, and surveys with key stakeholders and beneficiaries, including AIMS staff, Scholars Program partners, host country governments, Mastercard Foundation staff, lecturers, tutors, students, alumni, teachers, and school administrators.
- c) **Data analysis and triangulation**
- d) **Report writing**
- e) **Learning Workshop with AIMS**

Given the current COVID-19 pandemic, the selected consultants must plan to undertake the assignment completely remotely. If, however, it is deemed safe enough to travel and conduct in-person meetings, AIMS would expect the consultants to make site visits to AIMS Ghana, AIMS Cameroon and AIMS Rwanda and to the AIMS Secretariat in Kigali, Rwanda.

While this is the *proposed* approach to the assignment, as envisaged by AIMS, applicants are invited to show innovation and creativity in their proposal and draw from their own experience and expertise, while ensuring alignment with the assignment’s purpose and objectives.

6. Deliverables

The selected consultant(s)/firm will be expected to produce the following deliverables:

- a) **Inception report** detailing the proposed approach to the final evaluation and program design. The inception report will demonstrate the consultants/firm’s understanding and interpretation of the assignment’s purpose and objectives and include a detailed work plan, methodology, and draft outline for the final evaluation report and program design document.
- b) **Draft Evaluation Report** presenting the consultants/firm’s analysis, findings, and conclusions.

- c) **Draft Program Design Document** presenting the consultants/firm’s proposed second phase of the Scholars Program at AIMS.
- d) **Learning workshop** – AIMS will convene an online Learning Workshop where the consultants/firm will present their evaluation findings and proposed program design for Phase II to AIMS and Mastercard Foundation and facilitate a discussion for reflection, validation and feedback.
- e) **Most Significant Change stories** that demonstrate the tangible impact of the Mastercard Foundation Scholars Program at AIMS.
- f) **Final Evaluation Report** – This will incorporate feedback from the Learning Workshop.
- g) **Final Program Design Document** – This will incorporate feedback from the Learning Workshop.

If site visits go ahead, brief **Site Visit Reports** would also be required, detailing initial findings from observations and interviews/Focus Group Discussions at AIMS centres and the Secretariat. This provides AIMS an opportunity for a quick fact-checking prior to drafting the final report.

All deliverables will be submitted in English. Data collection and face-to-face interactions at some AIMS centres will require fluency in French.

7. Management of the Assignment

The AIMS Director of Monitoring & Evaluation will be responsible for overseeing and managing the assignment with support from the Associate Director of Evaluation and Program Performance and the Manager of the Mastercard Foundation Scholars Program at AIMS. The Director of M&E will review and approve all deliverables. AIMS will compile all background documents on AIMS and the Scholars Program; provide contact information for all key stakeholders; and if international travel and in-person meetings are advisable - organise all travel, accommodation and logistical arrangements.

8. Timeframe

The assignment will take place over a period of approximately 15 weeks as shown in the table below beginning in January 2021:

Phase	Key Activities	Timeframe
Inception	<ul style="list-style-type: none"> - Desk research of key background documents - Prepare draft Inception Report - Hold an online Inception Meeting with AIMS staff to discuss the draft Inception Report and gather feedback - Submit final Inception Report to AIMS 	3 weeks
Data collection	<ul style="list-style-type: none"> - Interviews, focus group discussions, and surveys - IF ADVISABLE: Site visits to AIMS Ghana, AIMS Cameroon, AIMS Rwanda and the AIMS Secretariat and submit Site Visit Reports (4) to AIMS 	6 weeks

Phase	Key Activities	Timeframe
Data Analysis and Report Writing	<ul style="list-style-type: none"> - Synthesis and analysis of data and information collected - Follow-up interviews where necessary - Submit Draft Evaluation Report and Draft Program Design Document to AIMS 	4 weeks
Learning Workshop	<ul style="list-style-type: none"> - Online presentation of findings, conclusions, and recommendations to AIMS staff and Scholars Program partners - Facilitated discussion to seek feedback and validation from participants - Incorporate feedback and submit the Final Evaluation Report and Program Design Document to AIMS 	2 weeks

9. Requirements and Selection Criteria

AIMS invites applications from firms or teams of at least three consultants with an appropriate gender balance and relevant expertise, experience, and skills to successfully undertake the assignment as described above. The team must demonstrate significant experience in designing, developing and evaluating complex Pan-African programs, ideally in the fields of higher education, teacher training, work integrated learning, youth employment, leadership development, and/or STEM. The team must be highly competent in monitoring & evaluation tools, methodologies and approaches; data collection and analysis; communication (verbal and written); report writing; and program design and development. The team must have sound project management skills to stay organised and deliver high quality deliverables on time. Previous experience working together would be an asset. Team members must be fluent in English with at least one member fluent in French.

10. Submission of Expression of Interest

Consultants/firms meeting the above requirements are invited to submit an Expression of Interest (EOI). The EOI must include the following:

- **Technical Proposal** detailing how the team meets the requirements above; understands and interprets the assignment’s purpose and objectives; and the proposed approach and methodology.
- **Financial Proposal** detailing the breakdown of costs, including daily rates of each consultant, number of days per phase, and estimated expenses (all in USD).
- CVs of all proposed team members.
- Contact information for three references who can attest to the firm/consultants’ experience and expertise as it relates to this assignment.
- Up to three reports of recently completed evaluations and program design/development of a similar nature.

Expressions of Interest will be assessed based on the following criteria:

- a) Demonstrated experience in designing, developing and evaluating complex Pan-African programs in the areas of higher education, teacher training, work integrated learning, youth employment, STEM, and/or leadership development - 40 %
- b) Strength of the proposed approach and methodology; understanding of the assignment's purpose and objectives; and grasp of the nature of the Mastercard Foundation Scholars Program at AIMS – 40%.
- c) Value for money as presented in the Financial Proposal - 20%.

Please submit your Expression of Interest to mel@nexteinstein.org with the subject line: **MCF Scholars Program EOI** by **22 November 2020**.

11. Annex

Annex 1: AIMS Mastercard Foundation Scholar Program - Logic Model

ANNEX 1: AIMS MASTERCARD FOUNDATION SCHOLARS PROGRAM - LOGIC MODEL



