# MICHIGAN DEPARTMENT OF EDUCATION

## APPLICATION INSTRUCTIONS FOR PART A OF THE 2008-2009 MATHEMATICS AND SCIENCE PARTNERSHIPS COMPETITIVE GRANT

## I. INTRODUCTION/BACKGROUND

In January of 2002, the No Child Left Behind Act of 2001 (NCLB)[1] became law. The Improving Teacher Quality Grant Programs (Title II) are a major component of the *No Child Left Behind* legislation. These programs encourage scientifically based professional development as a means for improving student academic performance. As schools are responsible for improving student learning, it is essential to have highly qualified teachers leading the way.

Title II, Part B of NCLB authorizes a Mathematics and Science Partnerships (MSP) program. MSP is intended to increase the academic achievement of students in mathematics and science by enhancing the content knowledge and teaching skills of classroom teachers. **Partnerships between high-need school districts and the science, technology, engineering, and mathematics (STEM) faculty in institutions of higher education are at the core of these improvement efforts.** In Michigan, it is preferred that the proposal have a plan for utilizing Michigan's Mathematics/Science Centers as per Sec. 99 of the School Aid Act (see Appendix A). Other partners may include public charter schools or other public schools, colleges of teacher education, community colleges, businesses, and nonprofit or for-profit organizations concerned with mathematics and science education.

Michigan has been allotted approximately $5,000,000 for the MSP competitive grant program for 2008-09. The Michigan Department of Education (MDE) is responsible for the administration of this program.

## II. PROGRAM DESCRIPTION

**Purpose:** The **Federal** *Mathematics and Science Partnership* program supports improved student achievement in mathematics and science through enhanced training for mathematics and science teachers. The Michigan Department of Education is responsible for conducting a competitive grant process that makes awards to partnerships of high-need school districts and science, mathematics, and engineering departments within institutions of higher education (IHE) (Part B - Mathematics and Science Partnerships).

The **Michigan** *Mathematics and Science Partnership* program this year will:

- Use a portion of the funds mentioned above to continue funding the 2nd year of the 3-year state-wide collaborative project.
- Consider new proposals under the following authorized activity of the Title II, Part B, Mathematics and Science Partnership, Section 2202 (c)(2): *Promoting strong teaching skills for mathematics and science teachers and teacher educators, including integrating reliable scientifically based research teaching methods and technology-based teaching methods into the curriculum.*
- Consider additional funding for previously approved and funded proposals, whose funding will end on 8/31/08. *The funding will be contingent on presenting sufficient documentation of the project's needs to extend or elaborate on the original project plan or to gather additional data to support project findings.*

[1] A complete list of abbreviations used throughout this document can be found in the Glossary of Terms at the end.

**Projects must also meet the following criteria:** [per 2008 SBE approved grant criteria]

- An active and well-defined **partnership with STEM** staff in all aspects of the grant including planning and delivery of professional development.
- Designed to improve **student achievement** to the Mathematics and/or Science content standards/expectations.
- Aligned with the Michigan Professional Development Vision and Standards.
- An **evaluation and accountability plan** that includes rigorous objectives that measure the impact of the activities of the project.

## III. APPLICATION PROCEDURES

Institutions/organizations interested in applying for a 2008-2009 Mathematics and Science Partnership Competitive Grant must submit a completed application on MEGS by the deadline of ***June 19, 2008 by 11:59 p.m.*** Applications through MEGS will be available beginning June 9, 2008. The following is a tentative timeline:

| Event | Proposed Date |
|---|---|
| Letters of Intent | May 23, 2008 |
| Deadline for application | June 19, 2008 |
| Peer review – Lansing | July 2, 2008 |
| Review results available to grantees | August 1, 2008 |

### Letters of Intent

A letter stating intent to submit an application for a MSP grant must be sent electronically by May 23, 2008 to Ruth Anne Hodges, MSP Team Leader, hodgesr3@michigan.gov. This letter should also provide a brief description of the proposal, a list of anticipated partners and an estimate of the amount that will be requested. This information will help us plan the peer review.

## IV. APPLICATION INSTRUCTIONS FOR NEW PROJECTS

### A. Eligible Applicants

Eligible applicants are Mathematics/Science Centers, Intermediate School Districts (ISD) or Regional Educational Service Agencies (RESA), Institutions of Higher Learning (IHE), or a high-needs school district (LEA) (see Appendix B).

### B. Essential/Eligible partners

Applications must have at a minimum a high-needs school district (LEA) and a science, mathematics, or engineering department within institutions of higher education (IHE). It is preferred, but not required, that the proposal also have a plan for utilizing Michigan's Mathematics/Science Centers[2] as per Sec. 99 of the School Aid Act (see Appendix A). Other partners may include another engineering, mathematics, science, or teacher training department of an institution of higher education; additional local educational agencies, public charter

[2] For a list of Mathematics/Science Centers visit www.mscenters.org

schools, public or private[3] elementary schools or secondary schools, or a consortium of such schools; a business; or a nonprofit or for-profit organization of demonstrated effectiveness in improving the quality of mathematics and science teachers.

## C. Targeted Activities

The MSP program seeks ways to sustain intensive, high-quality professional development activities that focus on deepening teachers' content knowledge. The program is also interested in increasing the knowledge of how students learn particular content, providing opportunities for engaging learning, and establishing coherence in teachers' professional development experiences. *New proposals must address ways of promoting strong teaching skills for mathematics and science teachers and teacher educators, including integrating reliable scientifically based research teaching methods and technology-based teaching methods into the curriculum.*

## D. Project Information

1. **Program Description** [complete in MEGS]
    a. **Professional Development Abstract:** A brief summary that provides sufficient information for an initial overview of the grant's project goals, key features of the professional development that will be addressed and a timeline.
    b. A description of how the activities will be **aligned with challenging State academic content and student academic achievement standards in mathematics and science** and with other educational reform activities that promote student academic achievement in mathematics and science.
    c. A description of how the activities will be **aligned to the** Michigan Professional Development Vision and Standards.
    d. Describe how the partnership will continue the activities funded under this part after the original grant or subgrant period has expired.
2. **Partner Information:** [complete in MEGS]
    a. Proposals that do not include a STEM department from an IHE and at least one high-needs school will be rejected by MEGS.
    b. Applications that include meaningful partnerships with any of the 33 Mathematics and Science Centers will receive priority points in the peer review.
    c. Only teachers from schools that meet the eligibility requirements (see Appendix B) can be served by the proposed project.
    d. Include documentation that **private schools** were invited to be a part of the project (see MEGS for more information)
    e. **Data** is needed to support high-needs status of schools. The United States Education Department (USED) requires a comprehensive assessment of the teacher quality and professional development needs of any schools and local educational agencies that comprise the eligible partnership with respect to the teaching and learning of mathematics and science. Descriptions of teacher quality and professional development needs of each eligible building that is supported with qualitative and/or quantitative data, including information from the Survey of Enacted Curriculum (SEC) is required with the proposal. However, successful applicants will be allowed to administer the SEC at the start of the project and to adjust PD plans if indicated by the results of the SEC. This option must be evident in the proposed management plan (see next

[3] While private school teachers may participate in the PD, they are not eligible for stipends, materials, etc. or other resources provided to public school teachers.

paragraph) and budget. The SEC results may also be used in the project evaluation.

3. **Management Plan:** [complete in MEGS]
    a. An organizational/process chart that outlines responsibilities of all partners must be completed. For each activity MEGS will ask for a description, a timeline, who will do the work, and the budget line items associated with the activity.
    b. Resumes or vita (limit to 2 pages) of key people in the partnership should be submitted in the appendix.
4. **Evaluation Abstract**: [complete in MEGS]
    a. A description of the eligible partnership's **evaluation and accountability plan.**
5. **Budget Detail:** [complete in MEGS]
    a. Projects will be asked to submit budgets for year 1 and year 2 in MEGS. Initial approval will be for the year 1 budget. Successful applicants will be asked to update their project in MEGS at the end of year 1. More information on allowable expenditures can be found in MEGS.
6. **Program Narrative:** The narrative will be uploaded into MEGS. It should be 20 pages maximum (double-spaced) and contain the following:
    a. A description of a plan that convincingly demonstrates how the proposed professional development activities will address the targeted activities (see Section C).
    b. A description of how the activities will be **based on a review of scientifically based research**, and an explanation of how the activities are expected to improve student academic achievement and strengthen the quality of mathematics and science instruction. The project description must cite and present the current state of knowledge relevant to the project. This brief literature review must clearly indicate why the proposed activities were selected or designed. If the proposal builds on prior work, the project narrative must indicate what was learned from this work, and how the lessons learned are incorporated in the project.
    c. Projects must clearly demonstrate that the submitting team has expertise in the content area and **the capacity to manage the project**, organize the work, and meet deadlines.
7. **Appendix**

    The Appendix **must** include:

    i. Resumes/vitas of key faculty and staff (maximum of 2 pages/person).
    ii. Letters of interest from STEM departments proposed as partners in the project.

    The Appendix can also include additional documents such as:

    iii. Evidence of impact from prior professional development efforts.
    iv. Elaboration of research or evidence base used to design this program.

- **Projects will compile and deliver a Professional Development packet to the Michigan Department of Education at the conclusion of the project.** This packet will include the professional development materials (e.g., syllabus, text, teacher resources, classroom vignettes) and any other necessary components that would enable the professional development replication. *Any products developed with Title II B monies do not have proprietary rights.*

## V. APPLICATION INSTRUCTIONS FOR CONTINUATION PROJECTS

### A. Eligible Applicants

MDE will consider additional funding for previously approved and funded proposals, whose funding will end on 8/31/08. The funding will be contingent on presenting sufficient documentation of the project's needs to extend or elaborate on the original project plan or to gather additional data to support project findings. These grants can fluctuate in length, as needed, from 6 months to 1 year. Grant size will not be more than the original award.

### B. Essential/Eligible partners

As much as possible original partners must be part of the project. Deviations from the original must be explained in the narrative. Projects must demonstrate that high needs schools and STEM faculty are part of the continuation.

### C. Targeted Activities

*See A. above*

### D. Project Information

1. **Program Description** [complete in MEGS]
    a. **Professional Development Abstract:** A brief summary that provides sufficient information for an initial overview of the grant's project goals, key features of the professional development that will be addressed and a timeline.
    b. A description of how the activities will be **aligned with challenging State academic content and student academic achievement standards in mathematics and science** and with other educational reform activities that promote student academic achievement in mathematics and science.
    c. A description of how the activities will be **aligned to the** Michigan Professional Development Vision and Standards.
    d. Describe how the partnership will continue the activities funded under this part after the original grant period has expired.
2. **Partner Information:** [complete in MEGS]
    a. Proposals that do not include a STEM department from an IHE and at least one high-needs school will be rejected by MEGS.
    b. Applications that include meaningful partnerships with any of the 33 Mathematics and Science Centers will receive priority points in the peer review.
    c. Include documentation that **private schools** were invited to be a part of the project (see MEGS for more information)
3. **Management Plan:** [complete in MEGS]
        i. An organizational/process chart that outlines responsibilities of all partners must be completed. For each activity MEGS will ask for a description, a timeline, who will do the work, and the budget line items associated with the activity.
        ii. Resumes or vita (limit to 2 pages) of key people in the partnership should be submitted in the appendix.
4. **Evaluation Abstract**: [complete in MEGS]
        i. A description of the eligible partnership's **evaluation and accountability plan** in original project as well as continuation where applicable.

5. **Budget Detail:** [complete in MEGS]
    i. Projects will be asked to submit budgets for up to 1 year in MEGS. Successful applicants will be asked to update their project in MEGS at the end of their project. More information on allowable expenditures can be found in MEGS.
6. **Program Narrative:** The narrative will be uploaded into MEGS. It should be 20 pages maximum (double-spaced) and contain the following:
    i. A description of a plan that convincingly **presents sufficient documentation of the project's needs to extend or elaborate on the original project plan or to gather additional data to support project findings.**
    ii. Indicate what was learned from current grant work, and how the lessons learned are incorporated into completing the project.
    iii. Projects must clearly demonstrate that the submitting team has expertise in the content area and **the capacity to manage the project**, organize the work, and meet deadlines.
7. **Appendix**

    The Appendix **must** include:
    i. Resumes/vitas of key faculty and staff (maximum 2 pages/person).
    ii. Letters of interest from STEM departments proposed as partners in the project.

    The Appendix can also include additional documents such as:
    iii. Evidence of impact from prior professional development efforts.
    iv. Elaboration of research or evidence base used to design this program.

## VI. AWARDING OF FUNDS

### A. Rejection of Proposals

The Department of Education reserves the right to reject any and all proposals received as a result of this announcement and will do so if the proposal does not adhere to funding specifications or application preparation instructions.

### B. Review Process

Proposals will be reviewed by staff for completeness and compliance with the requirements set forth in Title II, Part B of MSP to determine applicant eligibility. Any questions about significant omissions from a proposal or about applicant eligibility will be referred to the proposing organization. If, in the judgment of the Department, a proposal is significantly incomplete, or an applicant cannot establish its eligibility, the proposal will be omitted from the competition. The decision of the Department is final. Applicants submitting proposals that are withdrawn due to incompleteness or ineligibility will be notified through MEGS.

Grants will be awarded through a competitive review process. The review and scoring of each application will be based on criteria that support sustained and intensive high-quality professional development, based on the most current research. Using a numerical scoring system, this process is intended to identify the applications that meet the needs of Michigan's eligible schools.

An expert review panel will evaluate eligible applications according to OR against the required application components and the established criteria reflected in the scoring rubric. The review

panel will review each eligible application and make recommendations to the Department. Following the review, the Department staff will contact selected Project Directors to discuss any modifications of the project plan that may be required. In order to maximize the effects of limited funds, applicants may be asked to revise the project budget and/or scope of work.

## C. Review Criteria

In Michigan, applications that include any of the 33 Mathematics and Science Centers will receive additional points as stated in the State School Aid Act Section 99. The narrative portion of applications must address the criteria outlined in Section D. Supporting documents and data can be put into the appendix. A complete scoring rubric can be found on the Michigan Math/Science Partnership webpage.

### Additional Review Factors

In addition to the criteria listed above, the Superintendent of Public Instruction may apply other factors or emphasize specific factors in making decisions to fund proposals, such as evidence that the project will serve specific geographic areas and will facilitate the state in meeting the overall professional development, curriculum improvement, and teacher education goals.

## D. Award Administration

Notification of the Award: Once the review process is completed, the Superintendent/CEO/President and Project Director will be notified of the status of the proposal.

Award Conditions: For the 2008-2009 competition, approximately $5,000,000 is available for Mathematics and Science Partnership awards. In Michigan a portion of the funds will be set aside for continuations of current grants expiring this year. Applicants should note that Congress has not yet appropriated any funds for the 2009-2010 MSP programs. Continuation of awards is contingent upon this program receiving funding though the U.S. Department of Education and upon the State's evaluation of the funded programs.

Reporting Requirements: Each eligible partnership receiving a grant must report annually to the Michigan Department of Education and to the U.S. Secretary of Education regarding the eligible partnership's progress in meeting the objectives and annual targets described in the partnership's plan. Further information regarding reporting requirements and forms will be made available on the Michigan MSP website (Mathematics/Science Partnership) when available.

## Appendix A

### STATE SCHOOL AID ACT (PA155) SEC 99

Sec.99. (1) From the state school aid fund money appropriated in section 11, there is allocated an amount not to exceed $3,390,000.00 for 2007-2008 and from the general fund appropriation in section 11, there is allocated an amount not to exceed $110,000.00 for 2007-2008 for implementing the comprehensive master plan for mathematics and science centers developed by the department and approved by the state board, and for other purposes as described in this section. *In addition, from the federal funds appropriated in section 11, there is allocated for 2005-2006 an amount estimated at $4,456,000.00 from DED-OESE, title II, mathematics and science partnership grants.*

## Appendix B

### ELIGIBLE SCHOOLS

To be eligible for a Mathematics and Science Partnership Grant, buildings involved in the grant must meet **at least one** of the bulleted criteria listed below. Applicants must provide the data for each building targeted for participation as evidence of eligibility for their participation in the grant.

- Mathematics or science scores on the MEAP or MME <65%, ***and***
  Not achieving school-wide AYP due to mathematics or science achievement
  *Or*
  Having a history (4 or more years) of low or unchanged test scores
  *Or*
  Schools with student populations of over 35% **low-income (SES)** (determined by either the census or free and reduced lunches)
  *Or*
  An overall high school drop-out rate greater than 25% (high school buildings only)

- Schools employing teachers displaying limited mathematics or science content knowledge, ***and***
  Not achieving school-wide AYP due to mathematics or science achievement
  *Or*
  Having a history (4 or more years) of low or unchanged test scores
  *Or*
  Schools with student populations of over 35% **low-income (SES)** as determined by either the census or free and reduced lunches
  *Or*
  An overall high school drop-out rate greater than 25% (high school buildings only)
  *Or*
  Schools having Locale Codes of 6 or higher (rural schools)

## Glossary of Terms

**IHE –** Institutes of Higher Education – can include universities, colleges, technical institutes and community colleges.

**LEA –** Local Education Agency

**MSP –** Mathematics/Science Partnership Grant

**STEM faculty** – Faculty who are on staff in the science, technology, engineering or mathematics departments of IHEs.

**USED** – United States Education Department