

**STEM PROFESSIONAL DEVELOPMENT AND FELLOWSHIP PROGRAM
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STEM PROFESSIONAL DEVELOPMENT AND FELLOWSHIP PROGRAM GUIDELINES

1.0 GENERAL INFORMATION

The Arkansas Science & Technology Authority was created by Act 859 of 1983 and given the mission to bring the benefits of science and advanced technology to the people and the State of Arkansas. The Authority's enabling legislation (Arkansas Code Annotated, Section 15-3-101 et seq.) and governance require the Authority to adopt certain rules and guidelines for carrying out its mission.

1.0. PROJECT NAME

These guidelines govern the Arkansas Science & Technology Authority's *Science, Technology, Engineering and Mathematics (STEM) Professional Development and Fellowship Program*.

1.0. PURPOSE

The purpose of the STEM Professional Development and Fellowship Program is to promote and fund "special focus" workshops at the Network of Mathematics and Science Educational Resource Centers in their respective 12 geographic regions of Arkansas. These workshops will serve teachers in school districts in their service zone needing specialized STEM training. The program will also fund a series of teacher-fellowships to be used for specialized, individual professional development support.

1.0. AUTHORIZATION

The STEM Professional Development and Fellowship Program is authorized by Arkansas Code Annotated Section 15-3-109 (a)(7). The Arkansas Science & Technology Authority shall have all the powers necessary to carry out programs which include, but are not limited to engaging in innovative demonstration and pilot projects involving improved education and preparation of the future workforce in the areas of science, technology and mathematics.

2.0 PROJECT DESCRIPTION

The Arkansas Science & Technology Authority supports a competitive cash-matching grant project for the STEM Professional Development Program. The objectives of the grant program are to promote and support the delivery of professional development to science and mathematics teachers in Arkansas school districts needing training in both STEM instructional techniques and improvement of STEM curriculum. The focal point of each workshop provided shall depend on the identified areas of special need in STEM curriculum requiring enhanced professional development services.

The goals of this program are to: 1) enhance significantly the capacity of teachers (schools) to provide a challenging curriculum for students, 2) encourage more relevant, inquiry-driven, hands-on activities and instructional methods, and 3) promote the development of a cadre of STEM teachers with the knowledge, skills, and resources to enhance STEM curriculum in public schools.

2.1. TYPE OF AWARD

2.1.1. The Board of Directors of the Arkansas Science & Technology Authority awards grants to qualified applicants.

2.1.2. The Authority is authorized to defray up to, but not more than, fifty percent (50%) of the total cost of providing support for two (2) professional development workshops (~~\$2500~~ \$5,000 each) and fellowships (\$2000) not to exceed \$7000 \$12,000 total. The remaining fifty percent (50%) of the total cost of the proposed workshop and fellowship program must be funded by cash or in-kind services provided by the school districts participating and college or university collaborating in the project.

2.2. DEFINITIONS

2.2.1. For the purpose of the Authority's STEM Professional Development and Fellowship Program, the following words and phrases have the following definitions:

2.2.1.1. "In-kind services" shall mean scientific or technological equipment and/or supplies, release time, substitute teacher fees and indirect costs at fifty percent (50%) of the predetermined Health and Human Services rate.

2.2.1.2. "Officially submitted" shall mean a project proposal which has been submitted by an office of an Arkansas college or university that is legally empowered to accept grants on behalf of a qualified applicant.

2.2.1.3. "Qualified applicant" shall mean a designated individual associated with an Arkansas college or university.

3.0 ELIGIBILITY

3.1. **CRITERIA.** Applicant eligibility will be determined on the basis of the following criteria:

3.1.1. A Director or designated representative of the Math and Science Educational Resource Center affiliated with an institution of higher education must submit the proposal.

- 3.1.2. The proposed project must be for the purpose of providing workshops and fellowships that will directly provide professional development for STEM teachers in an area that is uniquely needed and must promote the purpose of the Authority to provide the benefits of science and/or advanced technology to the State of Arkansas and its people.
- 3.1.3. All workshops planned must meaningfully engage regional teachers in instructional methodologies and provide resources that teachers may retain for later use in their respective classrooms. Effective workshops likely will assess the needs of the teachers within the region and develop a long-term plan for addressing those needs within the focus of state and national science and/or mathematics standards and technology standards.
- 3.1.4. The proposal must address the area of the state to be served, the number of teachers within the area to be served and the need for workshops with specialized focus within that area.
- 3.1.5. The proposal must address the general management and organizational plan for the workshops as well as the strategies for granting individual fellowships.
- 3.1.6. The proposal must be officially submitted by an Arkansas college or university.
- 3.1.7. The Arkansas college or university officially submitting the grant application must assure funding for not less than fifty (50%) of the total cost for workshops by institutional/community/school district support through either cash monies or in-kind services.
- 3.1.8. The proposals must be submitted by an announced deadline date to be considered for a given solicitation.

3.2. CONFLICT OF INTEREST

- 3.2.1. No Director, officer or employee of the Authority for purpose of personal gain shall have or attempt to have, directly or indirectly, any interest in any contract or agreement of the Authority in connection with the Arkansas STEM Professional Development and Fellowship Program of the Authority.
- 3.2.2. It shall not be a conflict of interest for the Authority to permit any college or university with which a Director of the Authority is affiliated to participate in any program of the Authority provided that such Director shall promptly disclose the nature of the affiliation to the Board of Directors.

4.0 APPLICATION PROCESS

Application for the STEM Professional Development and Fellowship Program shall be in a format prescribed by the Authority. The following information shall be included.

4.1. APPLICATION

4.1.1. A Project Summary and Completion of Application Cover Sheet which contains the following information:

4.1.1.1. Name of the college or university applying for workshop/fellowship grant funds;

4.1.1.2. Name of the principal investigator;

4.1.1.3. Name, mailing address and email address of the institutional contract officer;

4.1.1.4. Mailing address and email address of the principal investigator;

4.1.1.5. Telephone number of the institutional contract office;

4.1.1.6. Telephone number of the principal investigator;

4.1.1.7. Title of the workshop (regional area);

4.1.1.8. Amount of funds requested from the Authority;

4.1.1.9. Technical abstract;

4.1.1.10. Dated signature of the institutional contracting official;

4.1.1.11. Signature of the principal investigator, department, and date.

4.1.2. A statement of the rationale of the proposed project, and a description of the broader impact of this project and resulting outreach on STEM curriculum in partner schools and/or individual teachers.

4.1.3. A review of the region to be served by the workshop/fellowships, including an assessment of previous workshops provided to teachers/schools within the region by the Center staff and how the proposed workshop/fellowships will enhance, expand or differ from previous workshops.

4.1.4. A clearly-described implementation plan for focus-area workshop. This should include the following:

4.1.4.1. Description of the proposed workshop goals,

4.1.4.2. Teachers to be targeted, contact time and total number of teachers served,

4.1.4.3. Management plan with organizational strategies and resources provided to teachers,

- 4.1.4.4. Outreach plans,
 - 4.1.4.5. Planning timetable and tentative date of events, and
 - 4.1.4.6. Information detailing the availability of supporting facilities, equipment, and personnel necessary to provide the professional development.
- 4.1.5. A clearly-described implementation plan for NASA interactive workshop. This should include the following:
- 4.1.5.1. Description of the proposed workshop goals,
 - 4.1.5.2. Teachers to be targeted, contact time and total number of teachers served,
 - 4.1.5.3. Management plan with organizational strategies and resources provided to teachers,
 - 4.1.5.4. Outreach plans,
 - 4.1.5.5. Planning timetable and tentative date of events, and
 - 4.1.5.6. Information detailing the availability of supporting facilities, equipment, and personnel necessary to provide the professional development.
- 4.1.6. A clearly-described of plans for fellowships. This should include the following:
- 4.1.6.1. Description of how the fellowships program will be managed,
 - 4.1.6.2. Which teachers will be targeted, contact time and total number of teachers served,
 - 4.1.6.3. General management and outreach plan for recruiting and awarding these fellowships and resources to be provided to teachers,
 - 4.1.6.4. Planning timetable and tentative period of scheduled visits, and
 - 4.1.6.5. Information detailing the availability of supporting facilities, equipment, and personnel necessary to provide the professional development.
- 4.1.7. A detailed budget for the program including equipment and consumables, accessory supplies, travel, and estimates of support requirements for events.
- 4.1.8. A statement addressing the extent to which the proposed project will build upon previously established effort to improve STEM educational curriculum and enhance STEM career awareness that have been provided by the Center in the past.
- 4.1.9. A statement detailing the sources and amount of the required matching funds to support the workshop/fellowships.
- 4.1.10. A description of the qualifications of the personnel to be involved in the proposed project. Relevant information would include the academic credentials of key professionals, and the record of current and past projects that are relevant to administration or management of a similar workshops or professional development training.
- 4.1.11. A description of the assessment technique to be used to determine the success level or benefits provided by the workshop/fellowships.

- 4.1.12. A statement that a final summary report will be submitted to the Authority within 60 days after expiration of the award period (one year). The final summary report shall include:
- 4.1.12.1. A topic sentence stating the project's major focus and service area;
 - 4.1.12.2. The primary objectives and scope of the project;
 - 4.1.12.3. The summary of the techniques or approaches used to establish project ;
 - 4.1.12.4. The results of first year efforts stated as concisely as possible with a description of evaluation procedures used to assess results.
 - 4.1.12.5. Other information as requested by the Board of Directors.

5.0 EVALUATION

Applications meeting the eligibility requirements will be evaluated on the basis of the following criteria:

5.1. CRITERIA

- 5.1.1. The educational merit of the proposal, including the quality and importance of the proposed project, and the suggested service area.
- 5.1.2. The competence of the professional personnel involved in the project as evidenced by relevant training, administrative experience, and support of institution.
- 5.1.3. The availability of technical and support personnel and resources necessary to ensure a reasonable probability of project success.
- 5.1.4. The soundness of the implementation plan and the likelihood that the project objectives will be achieved.
- 5.1.5. The probability that the requested support will result in the improvement in STEM curriculum and/or instructional techniques of STEM teachers.
- 5.1.6. The overall probability of success of the proposed project.

5.2. PROPOSAL REVIEW

- 5.2.1. Each proposal shall be initially reviewed by a member of the Authority staff to determine that eligibility requirements have been met.
- 5.2.2. The Stem Advisory Committee whose expertise in specific scientific/technological areas will aid in the evaluation of each proposal will review

all proposals and make recommendations to the Research Committee of the Board of Directors. The Research Committee of the Board of Directors shall be responsible for final review and recommendation to the Board.

5.2.3. Each eligible proposal will be reviewed and evaluated in terms of the purposes of establishing the project, the area to be served, the evaluation criteria, and the adequacy of the requested level of funding.

5.2.4. The Authority will make every effort to complete the review and evaluation process within 90 days after the deadline for receipt of solicited proposals.

5.3. AWARDS

The final decision to commit funds to an applicant shall be made by the Board of Directors of the Authority. The decision to fund/decline will be based on information derived from the review process and its accompanying criteria and the Board's own interpretation of the accompanying information. The Board's decision shall be final.

6.0 AWARDS LETTER

Cash awards will be distributed by the Authority on the recommendation of the Board of Directors based on terms and conditions agreed upon by the Board of Directors of the Authority and the submitting college or university.