

AMERICAN INDIAN HIGHER EDUCATION CONSORTIUM

121 Oronoco St. · Alexandria, Virginia 22314
(703) 838.0400 · Facsimile: (703) 838.0388



GROWING & SUSTAINING OUR OWN: NATIVE STEM PATHWAYS

The American Indian Higher Education Consortium (AIHEC) is excited to launch an initiative titled "Growing & Sustaining Our Own: Native STEM Teacher Pathways." Supported by the General Motors Foundation, this effort aims to address historic inequities and exclusion faced by American Indian and Alaska Native (AIAN) youth in K-12 schools and STEM fields by increasing the number of AIAN STEM teachers. The goal of this initiative is to support Tribal Colleges and Universities (TCUs) in developing and implementing strategies that expand community-grounded teacher education programs and foster an intertribal strategy for addressing AIAN STEM teacher shortages.

Scope of Work

STEM—science, technology, engineering, and mathematics—is integral to our daily lives. Yet, the disconnect between real-world applications and STEM curricula often leads students to view STEM as overly academic or unapproachable and can discourage students from pursuing STEM education as a career or profession. This perception, along with other challenges, contributes to the shortage of native STEM educators. Incidentally, fewer AIAN students enter and complete education programs, limiting the pool of future educators. Insufficient support systems for new educators and the need for culturally competent training further exacerbate these issues.

To address these challenges, AIHEC seeks proposals that advance one or more of the following goals through specific tasks:

Goal 1: Invigorate STEM Education in the Classroom

Task: Develop and implement curricula that foster critical thinking skills, encourage teamwork, and ignite curiosity through interactive learning activities that incorporate Indigenous knowledge and teachings.

Funded activities will focus on developing and implementing three (3) or more STEM-related unit and lesson plans that integrate STEM fluency skills and design challenges into elementary education curricula. The curriculum should emphasize connections between the curriculum and students' real-world observations. Grants are available to support new efforts that complement and enhance existing elementary education curricula in Indigenous communities, aiming to invigorate early exposure to and interest in STEM education.

Funds may support travel expenses, acquisition of supplies, outreach material for the development and implementation of the STEM-unit and lesson plans, and fees associated with teacher licensure requirements.

Priority will be given to proposals that:

- Develop curricula supporting trans/cross-disciplinary learning.

- Create STEM ecosystems fostering partnerships between educators and practitioners.
- Include Indigenous knowledge and teachings in the curriculum.
- Collaborate with local tribal elementary schools and other TCUs.
- Employ innovative and interactive activities.
- Empower pre-service teachers through the proposed activities.

Goal 2: Bolster the Quantity of Qualified Educators

Task: Develop and implement a comprehensive asynchronous Praxis state licensure preparation program for TCUs pre-service educator programs.

Funded activities will focus on developing, piloting, and launching an all-inclusive asynchronous Praxis state licensure preparation program for TCUs pre-service educator programs. The program must be online, modular, self-paced, with optional office hours, and can accompany existing in-person TCU-state licensure preparation programs or courses. The program must provide a recommended completion guide, course syllabi, student feedback, and opportunities for student contributions to course development. The preparation program must meet national and/or state-specific standards, align with milestones for aspiring teachers, and provide sufficient practice tests to help prepare students to pass the exams after completing a preparatory course. At least two preparatory courses must be developed within the pilot program. Grants are available to support the development of preparatory courses for the following exam categories or licensure areas:

- Praxis Core Academic Skills for Educators (Core)
- Principles of Learning and Teaching (PLT)
- Elementary Education
- Secondary Education

Funds may support travel expenses for TCU students and faculty to ETS exam facilities, incentives for pre-service educator's contributions to content and material development, and acquisition of Praxis exam test vouchers, supplies, and practice test simulations.

Priority will be given to proposals that:

- Develop streamlined curricula consolidating and building upon existing resources and preparation materials.
- Collaborate with other departments or TCU education programs for course development.
- Include STEM preparation courses.
- Provide sustainability plans for the long-term use of the developed resources.

Goal 3: Stimulate STEM Outside of the Classroom

Task: Develop and implement STEM-related community events or activities that provide equitable access to STEM education from TCUs to the community.

Funded activities must focus on developing and executing at least one STEM-related community event or activities that provide equitable access to STEM education from TCUs to the community. These events or activities may bring TCU expertise directly to K-12 classrooms, afterschool learning programs, community cultural events, or new initiatives designed to engage future STEM enthusiasts of all ages through inquiry-based hands-on activities.

Funds may support travel expenses, incentives for competition winners, supplies, event catering, development and delivery of educational materials, and demonstration workshops.

Priority will be given to proposals that:

- Highlight tangible learning goals and outcomes.
- Demonstrate mutual benefits to the TCU and intended audiences.
- Include an evaluation and media coverage plan.
- Collaborate with other departments or institutions to support development and implementation.

All grant awardees must report on their implementation activities and submit a final report.

Eligible Applicants: Any TCU with Regular Member status in AIHEC.

Available Funding:

Goal 1: Grants of up to \$25,000 each

Goal 2: Grants of up to \$35,000 each

Goal 3: Grants of up to \$20,000 each

Period of Performance: All grant activities must be completed by Tuesday, December 31, 2024.

Deadline: Applications must be received via e-mail by 8:00 p.m. Eastern time on Friday, August 16, 2024. E-mails must be sent to mjones@aihec.org.

Application Requirements: Applications must consist of a project narrative of no greater than 5 pages, with single-spaced, 12-point font text, and 1-inch margins. Project narratives must contain the following elements:

- 1) **Project Summary:** Please provide a brief and specific summary of what you propose to accomplish, no longer than one paragraph or 250 words. This must include a succinct description of the project's goal, activities, participants, and deliverables. **Please indicate which goal you are applying for in your summary.**
- 2) **Opportunity, Objectives, and Activities:** Describe specifically the problem/opportunity to be addressed including how your project will increase equitable access to STEM learning. Describe the target audience, the objectives, and the activities to be conducted. Describe any existing activities that will be complemented with the grant. Please provide a concise list of quantitative and qualitative deliverables that will be produced as a result of this project (i.e. number of unit or lesson plans, workshops, learning outcomes, trained X number of pre-service educators, number of schools or students, specific curriculum, unit, or lesson plan development, number of Praxis exam prep courses that will be developed, number of unit or lesson plans per course, workshops, learning outcomes, trained X number of pre-service educators, number of students that will take the exam, number of reports to be generated, or other relevant products).
- 3) **Key Personnel and Responsibilities:** Describe the project's key individuals and their responsibilities. Include any institutional partnerships or individual collaborators.
- 4) **Timeline:** Describe the timing and expected completion of project activities.

- 5) **Outcomes, Impacts, and Evaluation:** Describe the expected outcomes and impact of the proposed activities, as well as the evaluation plans and methods that will be used.
- 6) **Budget:** Describe how grant funds will be used to support the proposed project activities. Please ensure that there is a clear link and justification between the scope of work and the detailed budget estimate.

Selection Criteria Applications will be evaluated based on the following criteria:

- **Opportunity, Objectives, and Activities:** Clarity and logical relation of objectives and activities, addressing community needs, opportunities, or knowledge gaps, and complementing existing educational activities. A concise list outlining quantitative and qualitative deliverables.
- **Key Personnel and Responsibilities:** Qualifications and availability of key personnel, involvement of multiple pre-service educators, and institutional cooperation with schools for project implementation.
- **Timeline:** Reasonableness and achievability of project timing, ensuring completion by the deadline, with contingency plans.
- **Outcomes, Impacts, and Evaluation:** Clarity of expected outcomes and impacts and appropriateness of evaluation plans and methods.
- **Budget:** Responsible and appropriate use of funds for proposed activities.