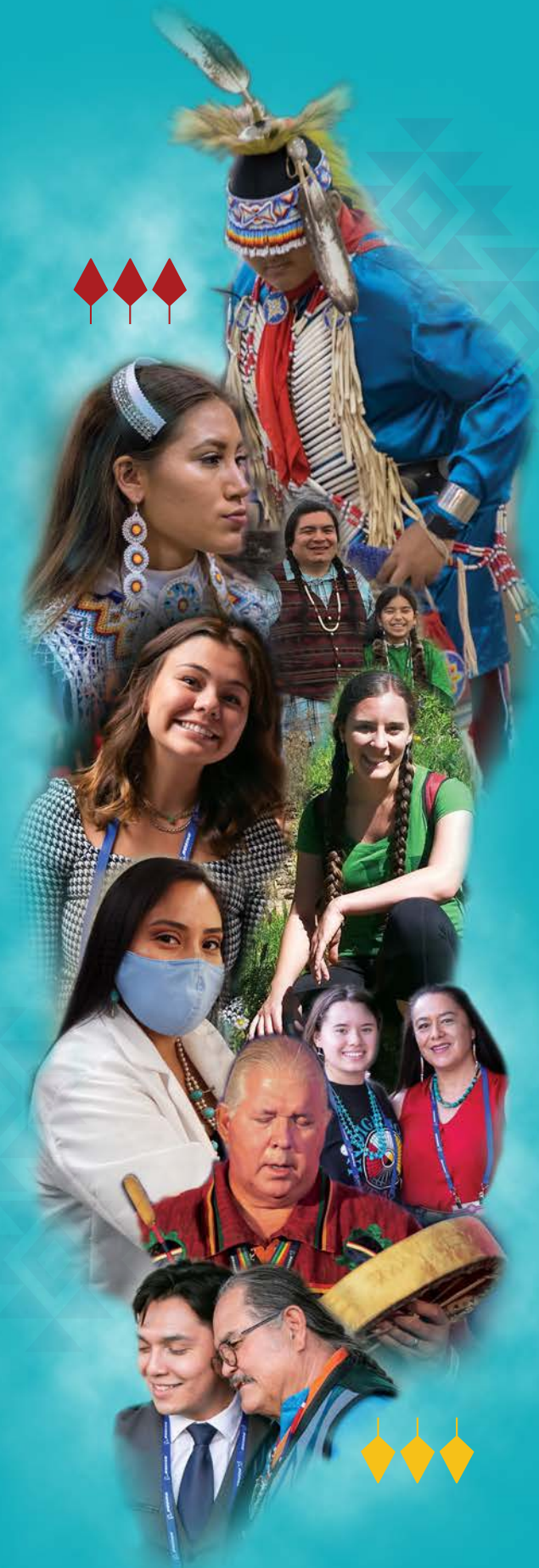


2024 PROGRAMMING PRIORITIES



 **AISES**

ADVANCING INDIGENOUS
PEOPLE IN STEM





AISES

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PEOPLE IN STEM





AISES Mission

Founded in 1977, AISES is focused on substantially increasing the representation of Indigenous peoples of North America and the Pacific Islands in science, technology, engineering, and math (STEM) studies and careers. Through chartered college and university chapters, professional chapters, tribal chapters, and affiliated PK-12 schools, members benefit from diverse STEM-focused programming that supports careers and promotes student success and workforce development in multiple crucial areas. To learn more, visit aises.org.

2024 Programming Priorities

AISES Approach to Indigenous STEM Workforce Development

- ▶ **Increase Awareness and Retention in PK-12 Education:** Start the pathway by increasing awareness amongst families and communities as to the importance of STEM education and providing culturally-relevant curriculum and programming to increase student retention.
- ▶ **Increase Access and Success in Higher Education:** Continue the pathway by providing financial, academic, and cultural support to college and university students to increase student access to and success in higher education.
- ▶ **Increase Leadership Opportunities for Professionals throughout their Careers:** Expand the pathway by providing professional development resources to increase the number of professional leaders in all employment sectors.
- ▶ **Increase Visibility and Understanding through Partnerships and Research:** Illuminate the pathway by engaging in research and cultivating strategic partnerships to increase the visibility and understanding of the challenges and solutions unique to Indigenous students and professionals in STEM studies and careers.





Annual Events

(Serving high school students, college students, and professionals)

AISES Regional Conferences

AISES college and professional chapters hold regional conferences in the U.S. and Canada to champion attendees and provide a wide variety of workshops and sessions. The regional conferences generate enthusiasm for STEM education and careers via conference features like mini-career fairs, poster presentations, and engineering competitions. Regional conferences are typically held at college campuses hosted by the respective school's AISES Chapter. Many professional members participate as mentors and speakers, sharing their expertise and facilitating discussions that might follow an established theme or focus in engineering, environmental science, or blending between Indigenous knowledge and Western science. The regional conference program illustrates how AISES is actively meeting the critical demand for STEM workforce development. These conferences help individuals to explore new challenges in STEM disciplines and careers, where AISES graduates and professionals are in high demand.

AISES National Conference

The AISES National Conference has been held annually since 1978 and is an unparalleled opportunity to connect companies more than 2,500 Indigenous high school juniors and seniors, college and graduate students, educators, workforce professionals and our corporate, government, private foundation, nonprofit, and tribal partners for professional development, networking opportunities, research presentations, workshops, awards, and traditional Indigenous cultural events. The National Conference hosts the largest college and career fair in Indian Country with many companies also hosting hiring events by conducting onsite interviews. Job seekers are provided interview coaching, and resume development, as well as career planning and other skills necessary to be successful in today's job market. For students considering college or graduate school, resources are provided to assist in financial planning, applying to college or graduate school, and information on the many STEM majors and careers available. AISES members and attendees from the U.S. and Canada, and as far away as Alaska and Hawai'i make connections and they find the resources and services to advise and advance their academic studies and careers.

AISES in Canada National Gathering

The AISES in Canada National Gathering is focused on two goals: building Indigenous Canadian leadership in STEM and expanding equitable and representative opportunities in all STEM fields. Since 1977, AISES has been building leadership and community for Indigenous peoples in STEM and working to increase representation through scholarships, trainings, networking, peer support, and mentorship at all levels of educational and professional experience. This three-day event provides opportunities for university students and professionals to enjoy keynote speakers, sessions, research presentations, and traditional Indigenous cultural events and local foods. The annual AISES in Canada National Gathering grows each year, with more interest from partners as well as attendees.



Student Success: PK-12

Indigenous Knowledge to Grow Successful STEM Teachers

The AISES program will provide Indigenous STEM educators and STEM educators at primarily Indigenous-serving schools – across the US – with a Culture-based Education professional development course which centers STEM teaching on Indigenous Knowledge. The graduate level course focuses on best practices for teaching STEM centering Indigenous Knowledge, while also incorporating Indigenous pedagogical knowledge, and is administered through partner school, Fort Lewis College – College of Education. The program maintains three goals: Goal 1) To increase STEM teacher retention at Indigenous-serving schools, Goal 2) To expand the impact STEM teachers have on the educational equity of Indigenous students, and Goal 3) To improve Indigenous student success through an academic model aimed at increasing proficiency in STEM by centering Indigenous Knowledge and values, emphasizing interconnection, inquiry-based learning, and place-based pedagogy. Additional programming by AISES around STEM teacher professional development is funded by New Schools Venture Fund.



AISES and FIRST Robotics

In partnership with For Inspiration and Recognition of Science and Technology (FIRST), AISES is facilitating the introduction of FIRST Tech Challenge Class Packs into Native-serving schools. Partnering schools will receive all equipment, training, and additional support resources provided by AISES to successfully incorporate the FIRST robotics curriculum into their classrooms. Additionally, AISES will host family events and administer scholarships to graduating seniors from participating schools. The goals of the projects are to remove barriers to participation in computing education, build awareness and increase retention for PK-12 students in STEM through engaging curriculum and teacher professional development, and to increase access and success in STEM higher education through financial and community support.



After-School STEM CCR Program

AISES is excited to introduce a community-focused after-school STEM College and Career Readiness (CCR) program incorporating a “full-circle” approach to STEM workforce development among Indigenous in five communities throughout both Navajo Nation and Osage Nation reservations. The program engages these communities with established AISES connections and programs (i.e., the National American Indian Science and Engineering Fair, AISES college and professional chapters, and partners). In partnership with Marathon Petroleum, the after-school students and faculty advisors will participate in AISES-curated programming, from science fair projects to applying to colleges for STEM degree programs. The Full Circle Program incorporates a holistic approach to student success.

Seeding Innovation: Expanding Computer Science for Native Students

In computer science education and degree completion, Indigenous students are significantly underrepresented in taking Advanced Placement Computer Science (AP CS) exams and completing computing degrees, which are critical precursors to entering the rapidly growing and high-paying computing occupations. To address educational and economic disparities among Native American communities and youth, AISES and the Kapor Center will build upon existing culturally relevant project-based CS courses, while also adding new partner schools each year for the next four years. Together, we work collaboratively with our partner school sites to create an engaging computer science curriculum, while also working with teachers and when possible, community members to integrate cultural traditions, language, stories, art, and more. It is a tribally-specific computer science curriculum that is built with and for the partner communities. This project is funded by the National Science Foundation Award #2049023

Learning Center

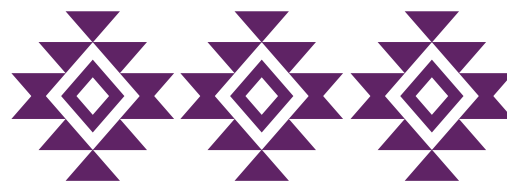
AISES continues to develop the AISES Learning Center, a comprehensive online website and resource directory for Indigenous PK-12 students, educators, and families that will help to advance equity and opportunity, specifically in science, technology, engineering, and mathematics education. This resource includes the development and sourcing of culturally relevant curriculum that will further advance the education and resources readily available to Indigenous PK-12 students, educators, and their families. The primary goal of the project is to increase the future success of Indigenous students, by providing them, their educators, and families, with lesson plans and educational resources needed to improve their STEM competencies early on, positively changing the trajectory of Indigenous PK-12 students. Development of the Learning Center is funded in part by Northrop Grumman.

National American Indian Science and Engineering Fair

As an affiliate of the Society for Science and the Public (SSP), the National American Indian Science and Engineering Fair (NAISEF) is part of the larger SSP fair network. NAISEF differs from other SSP-affiliated fairs in its dual in-person and virtual structure, which allows access for students who might not otherwise be able to participate. Virtual fairs are conducted online and via phone or video conference. The 2024 fair is hosted in Stillwater, Oklahoma, in partnership with Oklahoma State University's Division of Institutional Diversity. There are two categories for entrants, senior division (grades 9-12) and junior division (grades 5-8). AISES awards cash prizes to the winners of each division and winners are provided support to travel to and compete in the Regeneron International Science and Engineering Fair, the world's largest international science competition. The 2024 NAISEF is sponsored by Northrop Grumman, General Motors, the Central Intelligence Agency, Broadcom Foundation, and Indian Health Services.

National Conference STEM Day

Supported by the Boeing Company, this fun, interactive day of activities includes hands on STEM activities for high school students and educators provided by AISES technology partners. STEM Day also features a marketplace where PK-12 students can visit a variety of booths to learn more about AISES PK-12 opportunities and gain valuable professional development skills such as resume building, college application tips, AISES opportunities, and more.





Native Financial Cents: Curriculum and Experience

With funding from the Wells Fargo Foundation, AISES created the “Native Financial Cents: Supporting Financial Capability for Native Americans” (NFC) program; culturally contextualizing through supplementation of the Wells Fargo Hands on Banking curriculum to build the financial capability of Native youth and young adults. AISES developed the NFC curriculum to be used with students from primary school through college. The curriculum is deployed by AISES college students, professionals, educators, and others who provide train-the-trainer trainings or direct training to students within their communities. Additionally, AISES developed the AISES Adventure, a hands-on opportunity to move through stations and see how financial literacy applies to their future and their communities based on Wells Fargo Hands on Banking Experience. As students travel through different pathways, they use critical thinking to help evaluate their financial health and prepare for expected and unexpected financial events set within a tribal community context. Currently, AISES is working with tribal communities to more deeply root financial literacy, working with educators, students, and families to integrate financial education both in and out of the classroom. AISES has received additional funding from Wells Fargo to develop an app for the NFC and AISES Adventure curricula to further support engagement in financial literacy among Indigenous youth, families, and communities.

Next Generation of Indigenous Coders

Through the Indigenous Coders program, in partnership with Comcast NBCUniversal and their Project UP initiative, AISES provides computer science education and career readiness for Indigenous serving schools. This project aims to increase the number of Indigenous students in the technology and engineering fields, both in academia and industry. AISES is excited to expand the initiative, which started with three schools on the Navajo Nation reservation, by offering the STEM+CS and Career Readiness Course to additional schools nationwide in the upcoming academic year. This two-semester course combines applied computer science, engineering, and college and career readiness in technology and engineering fields. The course features culturally contextualized lessons (when appropriate) to further engage Indigenous learners. This program will also support schools in developing and building a Makerspace at their site to sustain use of the program supplies and curriculum after the initial program year.

Paths to Opportunities Newsletter – Student Edition

The *Paths to Opportunities* newsletter is distributed monthly to more than 14,000 AISES members, subscribers, and supporters. This must-read digital newsletter is for PK-12, college, and graduate students. It contains news of student opportunities along with editorial content targeted to the unique student demographic of Indigenous North Americans in STEM disciplines. Each issue has news from the AISES family on timely topics and upcoming events. The student edition includes news of scholarships, fellowships, and internships, plus articles filled with tips and advice to help students determine a major or ultimate career path in a STEM-related field.

SPRK-ing Interest in STEM and Computer Science

This AISES program combines robotics and computer programming to increase awareness and interest in STEM and Computer Science (STEM+C) among Native American students. The program engages students in hands on STEM+C activities powered by Sphero technology, created by AISES and tailored to Native students. AISES has partnered with the toy company Sphero to bring their educational spherical robot to Natives serving PK-12 schools across the country. Sphero is easily integrated into STEM curricula, allowing even the youngest students to learn programming, engage in hands on STEM+C activities, bridge technology and the arts, and enjoy creative discovery with their classmates. The goal of this STEM+C program is to inspire young Native minds to pursue and excel in their STEM and CS education. Additionally, AISES hopes to build the capacity of educators and schools to provide cutting-edge technological STEM+C experiences for its students by providing teacher trainings, lesson plans, and all the equipment necessary to incorporate Sphero technology in the classroom.

STEM College and Career Readiness Programs

AISES has developed a College and Career Readiness (CCR) Guidebook specifically addressing STEM education and careers and the unique needs, values, and workforces of Native students and tribal communities. The CCR Guidebook and programming aims to better prepare Native students to attend college and major in STEM, thereby helping address the significant underrepresentation of Native people in STEM studies and careers. The CCR resources will provide students and educators with STEM college and career assessments, an overview of STEM careers, STEM careers pertinent to tribal communities, a college assessment tool, college application guide, scholarships for Native students, resume and interview preparation, and basic financial literacy. AISES will also develop tools for implementing the CCR Guidebook both in and out of the classroom. AISES STEM CCR program partners include Northwest Area Foundation, Meyer Memorial Trust, The Helen Powers Fund, Cherokee Preservation Foundation, 3M, and the Administration for Native Americans.



Student Success: College

Resources for Indigenous STEM Education (RISE) Program

AISES is pleased to launch the RISE program, powered by Aristocrat Gaming. This exciting program, developed in collaboration with Aristocrat, aspires to engage and support Indigenous students, professionals, and tribes by offering exposure, resources, and programming to increase Indigenous talent in gaming education and careers. RISE programming's primary goal is to frame a snapshot of introductions to Gaming STEM careers for our AISES members, students, and professionals and a path to guide them. Through the program, AISES will offer multiple areas of connection and opportunity including: Academic Scholarships, Mentorship, Educational Sessions virtually and at AISES events, and travel support to premiere Tribal Gaming convenings.

Creating Access to CS Research for Indigenous Students

With support from the Google University Relations Research Inclusion team, AISES has established a one-year program to connect Indigenous college students with opportunities to learn more about and engage in computer science (CS) research through virtual workshops and research experiences hosted by Indigenous faculty and others passionate about engaging Indigenous students in CS research. The goals of the program are to 1) increase awareness and interest in CS research; 2) increase engagement in CS research; and 3) increase understanding of CS research, including education and career pathways for Indigenous students.

Native FEWS Alliance

The Native Food, Energy, and Water Systems (FEWS) Alliance is focused on the crisis in access to food, energy, and water in Indigenous communities and the lack of educational and career pathways available to Indigenous peoples to address these community crises. Funded by the National Science Foundation (Award # 2120001), the FEWS Alliance also seeks to build a highly skilled Native STEM workforce at the nexus of food, energy, and water to co-innovate and deploy Indigenous, place-based FEWS education and community partnerships. AISES is a partner

in the Native FEWS Alliance, serving to connect Indigenous students with the Alliance and to further its goals through AISES programs and events.

Good Relative Scholarship Award

AISES believes our relationships with Indigenous students are very important. We also understand the financial hardships of a student's academic journey. For this reason, AISES has established the Good Relative Scholarship Fund. This scholarship is designed to assist Indigenous students facing financial challenges by providing them with a one-time relief scholarship. This scholarship will be utilized to provide crucially needed financial support to students in emergencies including, but is not limited to, educational technology or technology-related resources, emergency travel costs, emergency housing costs, food insecurity, or other educational expenses. The Good Relative Scholarship Fund will provide this one-time scholarship in the amount of \$500 for qualified students. AISES plans to keep the Good Relative Scholarship Funds operating indefinitely, contingent upon the generous funding from our sponsors. The Boeing Company provided the inaugural contribution to the Good Relative Scholarship Fund.

College Chapters

There are AISES College Chapters across the United States and Canada. The primary objectives of the College Chapters are to enrich the educational, service, and social needs of the chapter's membership. College Chapters emphasize education as a tool that will facilitate personal and professional growth opportunities for students through mentor programs, leadership training, conference participation, and other activities.

College and Career Fair

An important part of every National Conference, the College and Career Fair is the largest event of its kind in Indian Country. Hundreds of corporations, government agencies, academic institutions, tribal industries, and nonprofits participate to share information about the many opportunities available for students and professionals.

College and University Tours

AISES National Conference participants can take part in events like college/university tours and industry tours. Students receive presentations on admissions, financial aid, and curriculum as well as campus tours with current students who talk about student life, classroom resources, and technology. The behind the scenes look at leading colleges/universities generates wonder and inspiration to students who are transitioning from high school in preparation for college.

Full-Circle Mentorship

AISES Full-Circle Mentorship program, supported by the Jack Kent Cooke Foundation, matches college student and professional AISES members in traditional and peer-to-peer academic and career mentoring. The mentorship program is open to college students and professionals at all stages of their career. Mentees will gain practical advice, encouragement, and support, learn from the experiences of others, increase their social and academic confidence, develop skills and strategies for academic and career issues, identify goals and establish a sense of direction, and gain valuable insight into the next stage of their education and career. Mentors will improve communication and interpersonal skills, develop leadership and management qualities, increase their confidence and motivation, engage in a volunteer opportunity valued by employers, enhance one's resume/CV, reinforce and gain recognition for their skills and experience, and feel an improved sense of fulfillment and personal growth.

Internships

The AISES Summer Internship program provides students with a 10-week applied summer work experience at a business or government agency and an opportunity to explore career options and to develop professional level skills. Interns gain resume-building skills and develop professional networks. In some cases, students create their own professional internship program within their discipline of study and within the parameters of the host agency.



Lighting the Pathway to Faculty Careers for Natives in STEM

In 2014, AISES was awarded more than \$1.5 million from the National Science Foundation (NSF) to create the “Lighting the Pathway to Faculty Careers for Natives in STEM” program. The goal of the program is to increase the representation of Native Americans in STEM faculty positions at colleges and universities across the country. The program has created an intergenerational community of undergraduates and graduate students, postdoctoral scholars, and junior and senior faculty members. In addition to mentorship, the program strives to provide students with valuable academic and professional support; travel funds; and educational, research, fellowship, and internship opportunities. In 2019, AISES was awarded another five-year NSF grant (Award #1935888) to continue the LTP program, increasing the total number of LTP scholars to nearly 200 over five years.

Scholarships

AISES helps students move forward in their educational journeys by providing a broad range of scholarship opportunities. Scholarships help students acquire skills and training that will help them meet the unique STEM needs of our communities. Our scholarship process is enhanced by our partnership with Indigenous Education Inc. (Cobell Scholarship Fund). This partnership provides a one-stop shop for students to complete information that aligns their goals with scholarships from other potential organizations that streamlines scholarship access. Some of our larger scholarship program partners include 3M, BNSF Railway, Chevron, Intel, Aristocrat, Accenture, San Manuel Band of Mission Indians, The Boeing Company, Google, Environmental Science Associates (ESA), FIRST, Stellantis, RISE, Polaris, Amateur Radio Digital Communications (ARDC), and Society of Professional Engineering Employees in Aerospace (SPEEA).



Student Representatives

The AISES Student Representatives evaluate common issues and concerns and make recommendations for ways to improve AISES' member services. They represent the AISES student membership and advocate for students and their needs within AISES. There are two Student Representative opportunities with AISES. The National (U.S. and Canada) Student Representatives serve as liaisons for the seven Regional Student Representatives and are also non-voting members of the board of directors. The US and Canadian National Student Representatives are elected by the AISES student members and serve a two-year term. The Regional Student Representatives work as liaisons for AISES college chapters that are divided into the seven geographical regions. Each region has its own Regional Student Representative that is elected each year at the annual Spring Regional Conferences by members in their region. Becoming a Student Representative with AISES is a fun and memorable experience that not only allows students to build their network, but also enables them to develop and strengthen their communication, leadership, and other professional skills.



Career Support

AISES is dedicated to supporting its professional members in STEM. We support early, mid-career, and executive professionals through professional development, career opportunities, networking, research support, and opportunities to support and mentor Native students in STEM. AISES support does not end once a student graduates from college and enters a STEM career, but rather provides ongoing career and professional development programming to help Native STEM professionals grow and succeed in their chosen career fields. Additionally, AISES offers a multitude of opportunities for professionals to “give back” through mentoring and supporting Native STEM students. Programming for professionals includes mentoring of students, scholarship review, research and science fair judging, serving as speakers and trainers at AISES events, advisory council service, professional development programming, career fair, professional awards, or engage in a growing professional chapter network across the U.S. and Canada.

Teacher Engagement and Motivation for Indigenous Students

With support from the Minneapolis Foundation and General Motors, Teacher Engagement and Motivation for Indigenous Students (TEAM-IS) will work with Minneapolis Public Schools (MPS) to create a culture of inclusivity and equity as both parties seek to increase all staff comprehension of the Native value systems Indigenous students navigate daily between home and school life. AISES will provide math and science culturally relevant professional development for all staff, working in a proven framework developed by the MPS Indian Education Team. Goals of the TEAM-IS program are to create a professional development program for educators to develop an understanding of 1) which Native tribes live in the greater Minneapolis area; 2) the histories of these Native tribes in early American colonization; 3) how Indigenous student cultures view knowledge and the attainment of knowledge; 4) how instructors implement best practices in creating and delivering culturally responsive and relevant curriculum within the subjects of math and science; 5) the effect of culturally responsive teaching on Indigenous student academic achievement; and 6) best practices in developing or supplementing required curricula with culturally responsive ideas, including Native historical uses of math and science.



Advisory Councils

AISES currently has a total of eight advisory councils: Academic Advisory Council, Academic Institution Advisory Council, Canadian Indigenous Advisory Council, Corporate Advisory Council, Council of Elders, Government Relations Council, Professional Chapter Council, and Tribal Nations Advisory Council. Each Council plays an important role in advising AISES in its work about each sector. The Council of Elders advises the AISES board of directors and organization on traditional and cultural matters.

Career Hub

The AISES Career Hub is the premier way to connect with organizations who are hiring Native STEM professionals. Visitors can search opportunities in academia, government, nonprofit, and other STEM industries. Employers can post their job openings to attract qualified Native STEM professionals through multiple channels and access to a resume database to find the right candidate for the job.

Grow with Google

AISES is a recipient of 250 scholarships for the Grow with Google Career Certificate Program to distribute to its community members. The Google Career Certificates are a suite of flexible online training programs available on Coursera.org. These certificates, built and taught by Google, are designed to provide learners from all backgrounds with job-ready skills within six months (can be completed more quickly by full-time learners). There are four specializations designed for anyone with no relevant experience - data analytics, user experience design, project management, and IT support.

Mentorship Opportunities

Many AISES programs aimed at supporting Indigenous college students also provide professionals with opportunities to serve as mentors, including AASONA, LTP, USAA, and Next50 Initiative. AISES professionals are also able to participate in the Full-Circle Mentorship program to receive professional development from peers or later-career professionals.



Next50 Initiative

Committed to improving the lives of older adults and specifically addressing the unique needs of Indigenous people over the age of 50, AISES is supporting a cohort of Indigenous Colorado residents to receive in-person and online professional and social support. AISES is providing professional development sessions aimed to increase the cohort's understanding of contemporary technical skills necessary to enter and thrive in today's technology-driven workforce. To ensure the program improves their quality of life while increasing the financial earning potential of cohort participants during the program and beyond the grant cycle, AISES provides the following to each member: mentorship, skill building professional development, connection to AISES partners (i.e., leaders in industry, academia, philanthropy, and tribal governments and enterprises), and professional networking. The Next50 program focuses on providing economic mobility through entry, re-entry, or advancement in all types of careers for professionals over age 50, a population severely underrepresented and underserved.

Opportunities Board

The AISES Opportunities Board connects talent with online resources through the AISES website. It is where opportunity seekers can find scholarships, internships, trainings, conferences, and other opportunities targeting Native STEM students and professionals. Recruiters can reach our talented pool of members and post events, fellowships, or interesting project - at no cost - to attract qualified Native STEM students and professionals. For a minimal fee, recruiters can upgrade their opportunity for additional outreach to engage candidates through multiple channels.

Partner Service Awards

Each year, AISES honors a select group of partners who have demonstrated outstanding collaboration and who help tell the AISES story. The AISES Partner Service Award winners are selected by the AISES staff in seven categories: Advocacy, Corporation, Educator, Foundation, Government Agency, Nonprofit, and Tribe.

Paths to Opportunities Newsletter – Professional Edition

The *Paths to Opportunities* newsletter is for STEM professionals and educators. It includes news of career development, internships, and current employment opportunities with outstanding organizations, agencies, universities, and corporations in multiple STEM fields, as well as articles and tips on building a flourishing career.



Professional Awards

Each year AISES recognizes outstanding individual achievement through the Professional Awards Program. Winners are selected by a committee of distinguished leaders from organizations that partner with AISES. That group has the difficult task of giving full consideration to the many excellent nominations that come in from across our membership. The winner of the Professional of the Year Award is selected based on overall leadership and technical achievement, and the remaining awards are made based on achievements in specific categories.

Professional Chapters

AISES has Professional Chapters across the United States and Canada. Professional Chapters give a community to Indigenous STEM professionals who then work together to create and support community events and activities. Professional Chapters often work with area schools to mentor students, speak to classes, and participate in their activities. They often also fund raise to support local students and other members to travel to conferences. Professional Chapters provide a network of professionals in a region so that they can have the connection of other Indigenous STEM professionals working together to advance the AISES mission.



Workforce Development

NSF INCLUDES Collaborative Change Consortia: Developing and Strengthening Partnerships to Better Support Women of Color in the Engineering Workforce

Society of Women Engineers (SWE) is partnering with AISES, the Society of Hispanic Professional Engineers (SHPE), Women in Engineering Proactive Network, Inc. (WEPAN), and the National Society of Black Engineers (NSBE) to support the Women of Color in Engineering Collaborative (WCEC), a consortium addressing the unique challenges facing women engineers of color. Through a cohesive support system of organizations from across sectors, the WCEC will leverage resources to promote systemic change while collectively removing barriers that lead to the attrition of women engineers of color. AISES will ensure that the WCEC's expansion includes Native American Serving Non-Tribal Institutions, Tribal Colleges and Universities, and key AISES partners across industries who have been instrumental in leading Indigenous inclusion in STEM. AISES will contribute to understand the needs and best practices specific to Indigenous women in engineering through research, programs, and strategic partnerships.

Women of Color in Engineering Collaborative

AISES is a collaborator in the Women of Color in Engineering Collaborative, a partnership network of professional engineering associations and STEM-based companies dedicated to addressing systemic barriers that prevent equitable work environments for women engineers of color. This network aims to create a shared vision focused on dismantling systemic barriers that impede the retention and advancement of women engineers of color and develop a strategic plan to guide collaborative activities that connect and energize people, cross divides, and drive systemic change toward equity.

50K Coalition – 50,000 Diverse Engineers by 2025

AISES, the Society of Women Engineers, National Society of Black Engineers, and the Society of Professional Hispanic Engineers comprise the Leadership Circle of the 50K Coalition, which has a goal to increase the number of diverse engineering degree recipients to 50,000 by 2025. The Coalition received support from the Clark Foundation to bring together universities, industry partners, and other professional societies working toward diversity and inclusion within engineering to join forces and pursue areas of synergy, explore lessons learned, and significantly increase the number of diverse engineering graduates.

Rematriation: Indigenous Womxn in STEM Leadership

Building upon a planning grant, AISES received additional support from the Henry Luce Foundation to support increasing representation of Indigenous womxn in STEM leadership positions. The Rematriation: Indigenous Womxn in STEM Leadership project builds on current efforts to empower Indigenous people, promote Indigenous knowledge, and reestablish Indigenous stewardship of the land. AISES acknowledges that many tribes have matriarchal practices where womxn traditionally held decision-making authority. Working to fully grasp the supports, institutional changes, cultural understanding, training, policies, and processes necessary to allow Indigenous womxn to reclaim leadership roles in STEM, AISES intends to move beyond conventional workplace needs of womxn by focusing more attention on the environment of STEM workplaces. The Rematriation project supports Indigenous womxn in the early stages of their career through mentorship, community building, and discourse to facilitate deep culture change in STEM workplaces.



Culture Change for Inclusion of Indigenous Voices in Biology

The LEAPS project aims to gauge the impact of Indigenous voices and representation, organizational membership, and Indigenous knowledge to drive culture change in the field of biology. Through its Lighting the Pathway project, AISES has developed an evidence base for maintaining persistence in STEM among Native scholars through culturally connected mentorship, community building, and professional development centering Indigenous values. LEAPS seeks to expand these findings' application outside of AISES, supporting the diversity and inclusion efforts of the Botanical Society of America, Entomological Society of America, and Ecological Society of America, to facilitate a cultural shift in how these organizations work with Indigenous scholars and communities to promote Indigenous voices and knowledge. In partnership with other biology professional societies, the project will form a peer network group to address inclusion of Indigenous voices across biology disciplines. (This project is funded by National Science Foundation Award #2134624.)





Research

National Native Scholarship Providers Research Group

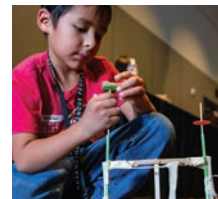
AISES is part of the National Native Scholarship Providers (NNSP) group, including the American Indian College Fund, Indigenous Education Inc., and Native Forward. The NNSP received a Spencer Foundation grant to collaboratively develop a shared database from which a research agenda will develop guiding multiple research inquiries over the lifespan of the grant. The grant consists of two main components. The first is the database and subsequent research, the second centers on the development of an institutional assessment measuring support of AIAN post-secondary students. The second component of the grant will necessitate interaction from the NNSP, especially in providing feedback and networking for the development and piloting of the assessment.

Higher Education Climate for Indigenous Students

The research project, Climate for Indigenous Students, uses Indigenous mixed-methods research approaches to understand the experience of Indigenous students across a range of college types (HSI, HBCU, PWI, AANPSI) and explores Tribal Colleges and Universities in transformation or change processes. We seek this perspective to deepen our understanding of a transformative environment for Indigenous student by investigating AIAN student post-secondary pathways to student success.

Research Rooted in Indigenous Knowledge

In collaboration with the U. S. Department of Agriculture Office of Tribal Relations, AISES has developed a program seeking to highlight Indigenous knowledge research. This program will support engaging high school, undergraduate, and graduate students to develop and conduct Indigenous knowledge research projects, presenting their work at the AISES National Conference. Additionally, the program supports increased awareness of Indigenous STEM knowledge and seeks to highlight Indigenous knowledge throughout AISES events and programs. This three-year project will take students on a skill-development journey in learning to implement best practices in research. The program will align with the AISES National Conference Research Competition, where AISES will create an Indigenous knowledge category and provide funding for project support and research presentations. This will give students an opportunity to present their research to a broad audience, increasing visibility of Indigenous-led research and encouraging increased engagement in Indigenous knowledge among AISES students, professionals, and partners.



Leveraging the AISES Archival Database: Mixed Methods Study on Native STEM Success

Involving AISES and the nonprofit STEM organization TERC, the project Leveraging the AISES Archival Database: Mixed Methods Study on Native STEM Success pursues this question: “What AISES experiences influenced persistence and success in STEM of Native students and professionals as they are related to the impact on their families, communities, and Tribal Nations and with respect to their intersecting identities?” Previous funding from the National Science Foundation and the Spencer Foundation allowed AISES to establish an archival database of participant data that spanned 30+ years. To build upon that work, a research team will analyze the existing archive as well as expand the database across time by tracking previous participants’ current outcomes. Additionally, an Indigenous mixed-methods study will involve a survey, conversations, and sharing circles with database participants. Funded by a new Spencer Foundation grant, this research will provide in-depth understanding of the experience of Native students and professionals with AISES, and how those experiences have impacted their families, communities, and Tribal Nations.

Poster and Oral Research Presentations & Competitions

Middle and high school, undergraduate, and graduate students and professionals showcase their STEM research through oral and poster presentation sessions during the AISES National Conference. AISES research poster presentations and competitions are the highlight of months of hard work, where individuals present their findings to a large audience. These presentations give participants the opportunity to share their research and receive valuable feedback on their work. Awards are given for exceptional research presentations.

Native STEM Portraits

Working with the nonprofit STEM organization TERC, AISES' Native STEM Portraits project focuses on the challenges and supports relative to Native participation in STEM careers. Targeting a spectrum of participants from undergraduates to professionals, the project has used surveys, photo elicitation, focus groups, and interviews around three areas: computer sciences and engineering; biological sciences; and mathematics, physics, and earth sciences. Activities include a literature scoping review, a longitudinal study, and extensive dissemination into a broad base of constituencies. (This project was funded by National Science Foundation Award #2000619.)

Gifts of Knowledge Study

Funded by the National Institutes of Health, the Gifts of Knowledge study builds on AISES research in the Lighting the Pathway project to advance Natives in STEM faculty careers. The project tests the efficacy of an intensive professional development intervention relative to a control group, to understand the mechanisms that explain the intervention effects. The project assesses the degree to which psycho-social factors mediate the relationship between the group differences, and long-term integration into the professional community, greater career persistence, and higher rates of mentorship of future Native scholars. Partner researchers are from the University of California San Francisco and Texas A&M University.



Tribal Nations

Tribal Community Engagement

The Tribal Nations Advisory Council (TNAC) at AISES consists of representatives from Tribal Nations in the U.S. and Canada. The primary role of the TNAC is to advise AISES on issues of relevance and importance to Tribal Nations. In addition, the TNAC works to assist AISES in creating opportunities for Tribal Nations and their citizens, and to support the AISES mission of substantially increasing the representation of Indigenous peoples of North America and the Pacific Islands in STEM.

We are All Scientists

AISES received an NIH All of Us Research program grant as a tribal community engagement partner to fund a major outreach campaign focused on health research and precision medicine to increase positive change in health research among Indigenous communities. The program provides Indigenous-serving teachers with a tool-kit of resources to engage Indigenous students to pursue health research studies and serves as a guide to collaborate with various Tribal Colleges and Universities (TCU) to create major partnerships to open the field of health research to Indigenous people, allowing them to persist in health research careers, while empowering them with the skills to acquire capital, achieve gainful employment, and serve their communities.

Eastern Band of Cherokee Indians

With funding from the Cherokee Preservation Foundation of the Eastern Band of Cherokee Indians (EBCI), AISES has developed and implemented a suite of engaging STEM initiatives to increase interest and awareness of STEM education and careers among EBCI citizens and across the Qualla Boundary. AISES has hosted its Leadership Summit in Cherokee, North Carolina, and has provided its SPRK-ing Interest in Computer Science programs, with Sphero robotics and introduction to block-based coding for STEM teachers at Cherokee Central Schools. Currently AISES is co-developing College and Career Readiness materials for Cherokee Central, highlighting STEM careers within EBCI. AISES' work with EBCI seeks to ensure Indigenous youth develop 21st Century skills and to support EBCI economic development by creating a future-ready workforce.

Other Initiatives

Comcast/NBC Universal Public Service Announcements

Since 2017, the Comcast Foundation has provided valuable in airtime to broadcast two public service announcements (PSAs) about AISES. The PSAs are designed to convey how, intergenerational, traditional Indigenous cultural knowledge is woven together with new ideas to generate innovation and energy that create a better world for everyone. The PSAs can be viewed on the AISES YouTube channel.

Planned Giving Services

Each year, AISES utilizes direct mail campaigns to reach new and existing donors. AISES has developed an individual giving program, in addition to major donor and planned giving programs. AISES currently relies on grants (corporate, foundation, federal, and tribal), event sponsorships, membership, and individual giving. With the 2022 hiring of a dedicated individual giving program director, AISES is embarking on a capital campaign to ensure sustainability for another 50 years and beyond.

Sequoyah Fellows Lifetime Members Program

The AISES Sequoyah Fellows Lifetime Member program was named in memory of Sequoyah, the Cherokee innovator who perfected the Cherokee syllabary in 1821. The syllabary built strong literacy skills among the Cherokee people and it had a profound impact on Cherokee tribal history that is visible today. Sequoyah Fellows are a growing family of members of nearly 1,600 individuals who are invested in and sustain the AISES organization. Fellows support a variety of activities and programs that move AISES forward, while engaging a range of new and existing stakeholders in the AISES mission.

Winds of Change Magazine

The award winning Winds of Change magazine is the premier choice to reach Indigenous people in STEM. Distributed across the U.S. and Canada, Winds of Change is a multifaceted resource that is designed to engage every part of the growing AISES family. Each issue includes timely feature articles along with a message from AISES leadership, news of AISES members and chapters, and opportunities for readers - from PK-12 through professionals - to gain knowledge and experience in their chosen field. It is produced five times a year and distributed to AISES members, sponsors, and friends, with an average circulation per-print issue of 8,000. All are promoted on social media and available digitally in a format optimized for mobile devices. Visit woc.aises.org to access past and current issues.

To learn more about the range of initiatives administered by
AISES, visit www.aises.org.





AISES

ADVANCING INDIGENOUS
PEOPLE IN STEM

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