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South Dakota Mines has several activities and programs geared toward supporting the access and success of the American Indian student and surrounding community. Whether through pre-college orientation, summer bridge programs, research, or undergraduate and graduate education, there are many opportunities to support South Dakota’s largest minority group. All programs described in this report are facilitated by someone on the Mines campus.

// RECRUITMENT

American Indian Science and Engineering Society (AISES) Pre-College Outreach

The South Dakota Mines chapter of the American Indian Science & Engineering Society (AISES) provides science and engineering experiences for places with high concentrations of American Indian children such as the Black Hills Children’s Home. They also strive to strengthen AISES Region V, by assisting other institutions to develop associate AISES chapters. In the past, AISES members have worked with the Mines faculty with a science-based program at Central High School as well as offered tutoring. The chapter is also invited to speak to K-12 reservation-based schools when they visit campus. The purpose of the pre-college outreach is to build a foundation among American Indian youth to pursue higher education, particularly in the STEM fields.

Contact:
Jesse Herrera, AISES Advisor, Director of Inclusion

Office of Admissions Outreach

South Dakota Mines’ Office of Admissions makes concerted efforts to connect with high school students, school counselors and math and science teachers at tribal high schools and high schools with high concentrations of Native American students in South Dakota and surrounding states. The purpose of these connections is to educate Native American parents and pre-college students about the value and process of entering higher education, as well as the benefits of a science or engineering education at South Dakota Mines. South Dakota Mines participates in College Application Week. This program provides fee waivers for students at all high schools across the state, many of which are tribal schools.

Connection is accomplished in a variety of modalities including technology, media and literature, but primarily through in-person contact such as: high school visits; college fairs (Mobridge, Eagle Butte, Winner, Pine Ridge, etc.); representation at Lakota Nations Invitational basketball tournament in Rapid City (specifically at the LNI college fair); presentations to middle and high schools visiting the campus; encouragement and recruitment of current students to both reach out to their home high schools, family, and friends regarding education at South Dakota Mines and represent the university through the Student Ambassador program. The Office of Admissions is newly focused on developing a partnership with Lakota Tech High School. Because two of the academies within this high school focus on STEM and healthcare careers, they are a natural partner.

Contact:
Molly Moore, Associate Provost for Academic Administration and Director of Admissions
Tribal Liaison

The Director of Planning & Events in the Office of the President serves as a liaison between the university and tribal schools and organizations. The liaison has assists in the planning of outreach events for tribal school students and frequently represents the university in discussions involving collaboration with tribal organizations.

Contact:
Jade Herman, Director of Planning & Events, Office of the President

// RETENTION/SUPPORT

Center for Inclusion Pre-Orientation

This program invites self-identified, incoming students of color which includes non-traditional and transfer American Indian students. At the start of the fall semester, students come to campus the week before classes begin to start the acclimation process to college life. The Office of Residential Life allows students to move in prior to official move-in day. During this time students attend sessions to get oriented to their class schedule, meet their advisors, are paired with mentors, build relationships with each other, and learn how to be successful in college. American Indian students who participate in this program will have some of their textbooks covered through the Center for Inclusion Book Loan Library.

Contact:
Jesse Herrera, Director of Inclusion

Mentor Program

To ensure that no American Indian student feels isolated or unsupported, peer mentorship is offered to all students who participate in the Center for Inclusion Pre-Orientation as well as those who feel they could benefit from such a relationship. Mentors provide guidance, connection and support throughout the first semester. Although the commitment for students is only for the first semester, many continue their relationship well into the future. The goal of the program is to positively impact retention rates of American Indian students. Related objectives are for minority students to have a successful and satisfactory first year, whether they are first-time freshmen, transfer, or non-traditional students. The program is also geared toward reinforcing a Native support system for students who may feel out of place. Mentors are volunteers, but the Center for Inclusion compensates students when funds are available.

Contact:
Jesse Herrera, Director of Inclusion
National Science Foundation (NSF) OSSPEEC II Grant

A Pre-Engineering Education Collaborative with Oglala Lakota College, South Dakota State University, and South Dakota Mines. The project aims to increase recruitment, retention, persistence, and completion rates in pre-engineering and engineering for Native American students. OSSPEEC II provides culturally centered and integrated project based experiential learning through pre-engineering classroom activities and co-curricular activities consisting of research on reservation needs in the areas of water quality and quantity, geology, and sustainability. The project also investigates and elucidates the impact of the OSSPEEC model which emphasizes the importance of experiential learning and incorporation of the Lakota world view as the basis for making essentially correct preconceptions in engineering. The program is designed for Native American students to complete their first two years of engineering education at Oglala Lakota College and then to complete their engineering education at South Dakota State University or South Dakota Mines. An additional goal of the OSSPEEC II project is to improve the quality of engineering education at Oglala Lakota College through professional development of faculty and staff.

Contact:
Dr. Foster Sawyer, Associate Professor Geology and Geological Engineering
Dr. Sarah Keenan, Assistant Professor Geology and Geological Engineering

Emergency Fund

The Emergency Fund is intended for students with a dire financial need. The purpose is to assist students with unexpected expenses which may put them at risk for dropping out of school. Funds may be used to pay for vehicle repairs, utility bills, textbooks, counseling, and other support. This fund has also helped many students who have encountered acute financial need due to illness or injury, or loss of employment. Funds are accumulated from private donations. The Emergency Fund is open to all students including American Indian students.

Contact:
Dr. Pat Mahon, Vice President for Student Development and Dean of Students Student Development

American Indian Science & Engineering Society (AISES)

South Dakota Mines has an award-winning AISES chapter that promotes excellence, leadership, and opportunities in education and professional development of students. AISES participates in national and regional conferences, scholarships, job placement assistance, internships and co-op opportunities, networking and social support, community service and campus involvement.

Contact:
Jesse Herrera, Director of Inclusion

Center for Inclusion

Provides direct student support services for all underrepresented students, including American Indian students. Support services include, but are not limited to, scholarship alerts, internship/co-op information, as well as providing opportunities for leadership and professional development. The Center also provides leadership and helps to facilitate the coordination of programs to underrepresented groups, especially those related to American Indian students. The office reaches out to all underrepresented populations; holds free student lunches for networking and social support each semester; and coordinates the Honoring Ceremony for American Indian graduates. The Center also collaborates with several departments across campus to promote diversity and inclusion initiatives for students, staff and faculty.

Contact:
Jesse Herrera, Director of Inclusion
American Indian Honoring Ceremony

The Center for Inclusion coordinates and sponsors the American Indian Honoring Ceremony established in December 2008. This is a special ceremony held in the spring the day before campus commencement. It celebrates and honors South Dakota Mines Native graduates by providing a traditional meal for graduates, family, and invited community. Speakers are drawn from faculty, staff, alumni, and tribal communities. The Honoring Ceremony includes an invocation, prayers, songs, a traditional meal and presents to the graduates from their families.

Contact:
Jesse Herrera, Director of Inclusion

Research Experiences for Undergraduates (REU)

South Dakota Mines is host to two NSF REU programs, the NSF REU “Back to the Future” Site and the NSF REU “Security Printing and Anti-Counterfeiting Technologies (SPACT)” Site. These programs provide research opportunities for underrepresented students (particularly Native American students). The REU sites engage students in a funded 10-week summer undergraduate research experience. The sites are open to students from all backgrounds that are interested in science and engineering.

The theme of the “Back to the Future” site is Metallurgical/Materials engineering research, with many of the projects having historical, cultural, or artistic significance. Supplementary activities include many hands-on workshops involving art, history, and metallurgy some of which are led by local Lakota artists. The program website is located at: http://met.sdsmt.edu/reu/.

The REU SPACT site focuses on research to combat counterfeiting. Several of the past projects engaged students in the authentication of Native American artifacts. Recently, the SPACT research team and students have teamed with area museums such as the Heritage Center at Red Cloud Indian School to address issues with counterfeiting of Native American art. The program website is located at: http://spact-center.org/reu/.

As part of the site activities, undergraduate students are also involved in outreach activities which support ongoing programs that support Native American high school students such as the Army Educational Outreach REAP and UNITE program. Recent highlights include student presentations at the national American Indian Science and Engineering (AISES) conference and student mentoring of local Native American high school students. The sites have had an average participation of nearly 20% Native American students.

Contacts:
Dr. Michael West, Department Head and Associate Professor Department of Materials and Metallurgical Engineering
Dr. Grant Crawford, Associate Professor Department of Materials and Metallurgical Engineering

NSF Tiospaye Scholar Program

American Indian students at South Dakota Mines may qualify for the Tiospaye Scholar Program. This program is dedicated to increasing the numbers of American Indian students receiving STEM degrees by providing support in five areas: financial, academic, professional, cultural, and social. In the current version of the program, students in approved STEM majors are eligible to apply for the NSF All Nations AMP stipend after one semester of attendance. Students with cumulative GPAs exceeding 2.5, 3.0, and 3.5 are eligible to receive $1200, $2400, and $3600 annually. Once AMP scholars confirm AISES membership, they become Tiospaye Scholars and become eligible for the support components. Since inception in 2009, we have graduated 50 Tiospaye Scholars. We currently have 16 Tiospaye Scholars. A major initiative is underway to secure private funding to establish three permanent endowments to support the program for the future. The Tiospaye Scholar Program is housed on the garden level of the Devereaux Library and is co-located with the Industrial Engineering Department.

Contact:
Dr. Carter Kerk, Professor of Industrial Engineering, Director NSF Tiospaye Scholar Program
// SCHOLARSHIPS

South Dakota Mines is a member of the NSF All Nations Louis Stokes Alliance for Minority Participation headquartered at Salish Kootenai College. The program provides merit-based scholarships for up to $1050 per semester, as well as travel funds for students to attend professional conferences. Since 2009, 50 SD Mines students have received over $78K in stipends.

Scholarships

In addition to the above programs, the South Dakota Mines Center for Alumni Relations and Advancement has sought out and awarded over $90,000 in scholarships. These figures do not include the Tiospaye Scholarship, departmental scholarships, or other outside scholarships.

<table>
<thead>
<tr>
<th>Award Name</th>
<th>AY 20-21 Available</th>
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<tbody>
<tr>
<td>Frank F. &amp; Clare M. Aplan Native American Fund in Metallurgy</td>
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<tr>
<td>Lowell A. Jobe Scholarship</td>
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<td>Barry Halfred Memorial Scholarship</td>
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<td>Shakopee Mdewakanton Sioux Community Scholarship</td>
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<td>Stephens American Indian Student Assistance Scholarship</td>
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<td>AISES/Dr. Jack Weyland Scholarship</td>
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<td>Wayne Dalke Native American Scholarship</td>
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<td>Pete Lien &amp; Sons Scholarship</td>
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<td>Walter Hansen &amp; Marilyn Jackson Native American Scholarship</td>
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<td>Allan Hins Native American Scholarship</td>
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<td>Otto Jenny Scholarship</td>
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<td>Joseph &amp; Alys Ratigan Scholarship</td>
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<td>Jack (John) &amp; Winnie Shedd Scholarship</td>
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<td>Paul Dirksen Smith Endowed Memorial Scholarship</td>
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<td><strong>Total</strong></td>
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With Preference (but not requirement) of Native American (or another underrepresented group)

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<tr>
<th>Award Name</th>
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<tr>
<td>Cargill CBE Scholarship</td>
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<td>Cargill MEM Scholarship</td>
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<td>David A. Sonstegard Presidential Scholarship</td>
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<tr>
<td>Bill &amp; Janet Pearson Scholarship</td>
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<tr>
<td>C. Robert &amp; Dorothy Todd Scholarship</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$36,310</strong></td>
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NASA South Dakota Space Grant Consortium (SDSGC)

South Dakota Mines is the lead institution of the SDSGC and seeks to expand opportunities for Native Americans in particular through education, research, and public services in the fields of aerospace, earth science, and supporting STEM disciplines. The goal of the SDSGC Fellowship/Scholarship program is “To administer a Fellowship/Scholarship program that offers educational and research opportunities to students from diverse backgrounds who are pursuing degrees in fields of STEM that align with NASA’s mission and those of SDSGC members and affiliates.” SDSGC’s Diversity goal is “To model diversity in all Consortium programs and activities, with an emphasis on Native Americans, which make up the state’s largest minority group.” SDSGC provided $2.44 million in scholarships and fellowships to 810 students at ten South Dakota public, private, and tribal colleges/universities from FY2005-2020 and annually meets its objective of providing at least 15% of its awards to minority students; most of whom are Native American. Several Native American students at South Dakota Mines have conducted 10-week summer and 16-week semester research internships at NASA Centers.

Contact:
Thomas Durkin, Deputy Director of South Dakota Space Grant Consortium

South Dakota NASA EPSCoR Program

Under a Tribal College Collaboration Grant, SD NASA EPSCoR is funding a project at SDSMT titled “Leveraging the Resilience and Recovery in the Pine Ridge Indian Reservation area through the Analysis of Spatial-Temporal Data-Driven Aerial Imagery.” The principal investigator is Dr. Hyeong Suk Na in the Department of Industrial Engineering. Dr. Na will collaborate with Dr. Liangping Li in the Department of Geology and Geological Engineering and with James Sanovia of Oglala Lakota College (OLC). The two-year grant provides $18,500 for the project, which includes support for one student from OLC each year. The project will use aerial photography as well as NASA satellite remote sensing data to develop an automated damage assessment tool that can be applied to natural disasters including snowstorms, prairie fires, and flooding on the Pine Ridge Indian Reservation. An important goal of the project is to enable the OLC students to enter an undergraduate engineering program at South Dakota Mines at the junior level with the help of the Tiospaye Scholar Program (TSP) supported by NSF.

Contacts:
Dr. Edward Duke, South Dakota Space Grant Consortium;
Dr. Hyeong Suk Na, Assistant Professor, Department of Industrial Engineering

Apex Gallery

The Apex Gallery has a tradition of exhibiting Native American artists and has shown the work of local, regional, and national tribal members.

Contact:
Matthew Whitehead, APEX Gallery Director & Lecturer of Fine Art

Museum of Geology

The Museum of Geology provides tours and outreach activities for students in Rapid City and those students attending schools on the Pine Ridge Indian Reservation, including Little Wound School and Lakota Tech.

Contacts:
Ms. Emily Berry, Assistant Director Museum of Geology
Dr. Nathaniel Fox, Associate Director Museum of Geology
The South Dakota Board of Regents Factbook for the fiscal year of 2020 shows that American Indian students comprise of 2.42% (60 AI students) of the total student body (2,477) in the fall 2020 at Mines. In comparison to the previous year, there was a large decrease from 3.04% (77 AI students) in fall 2019. Due to the pandemic, there was a decrease in almost all student populations, not only at Mines but across the entire BOR. Also, in fall 2020, there were four American Indian students pursuing graduate degrees and two pursuing doctorates.

**The Center for Inclusion Mission Statement:**
Cultivate an inclusive campus climate that supports underrepresented populations, fosters respect for those with diverse backgrounds, and promotes cultural proficiency among faculty, staff and students.

**The SD Mines Inclusion Statement:**
South Dakota School of Mines & Technology is committed to cultivating an inclusive learning environment where faculty, staff, and students can grow and succeed. We value the diversity of unique backgrounds, experiences, perspectives, and talents within our community. It is our goal to promote a culture of respect, honor, understanding, integrity, and collaboration. It is through this diversity and inclusion that we find our strength.  https://www.sdsmt.edu/Inclusion-and-Diversity/

With the values of **integrity**, **ingenuity**, **inclusion**, and **impact**, SD Mines operates through Strategic Priorities, each with implications for American Indian support and access.  
https://www.sdsmt.edu/About/Strategic-Plan/
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Program</th>
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<tbody>
<tr>
<td>Anderson, Laurie</td>
<td>Department Head and Professor, Geology and Geological Engineering; Director, Museum of Geology</td>
<td>Museum of Geology</td>
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<tr>
<td>Berry, Emily</td>
<td>Assistant Director Museum of Geology</td>
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<tr>
<td>Crawford, Grant</td>
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<td>Durkin, Thomas</td>
<td>Deputy Director of South Dakota Space Grant Consortium</td>
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<tr>
<td>Fox, Nathaniel</td>
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<tr>
<td>Herman, Jade</td>
<td>Director of Planning &amp; Events, Office of the President</td>
<td>Tribal Liaison</td>
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<tr>
<td>Herrera, Jesse</td>
<td>Director of Inclusion</td>
<td>Center For Inclusion, AISES, Pre-Orientation, Mentor Program, Honoring Ceremony</td>
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<tr>
<td>Johnson, Brad</td>
<td>Vice President for Development</td>
<td>Center for Alumni Relations and Advancement</td>
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<tr>
<td>Keenan, Sarah</td>
<td>Assistant Professor Geology and Geological Engineering</td>
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<tr>
<td>Kerk, Carter</td>
<td>Professor, Industrial Engineering; Director NSF Tiospaye Scholars Program</td>
<td>Tiospaye, ANLSAM</td>
</tr>
<tr>
<td>Mahon, Pat</td>
<td>Vice President, Student Development; Dean of Students, Student Development</td>
<td>Emergency Fund</td>
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<tr>
<td>Moore, Molly</td>
<td>Associate Provost for Academic Administration; Director of Admissions</td>
<td>Admission Outreach</td>
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<td>Na, Hyeong Suk</td>
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<td>Rankin, Jim</td>
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<td>Sawyer, Foster</td>
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<td>Whitehead, Matthew</td>
<td>APEX Gallery Director &amp; Lecturer of Fine Art</td>
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