

Department of Geology & Geological Engineering Advisory Board Meeting
Saturday, March 26, 2022

In Person Attendance: Steve O'Rourke, Laurie Anderson, Jim Rankin, Ed Duke, Trevor Waldien, Jay Nopola, Arden Davis, Larry Stetler, Barbara Nielsen, Nuri Uzunlar, Gokce Ustunisik, Kevin Ward, Dave Hammond, Tim Barker, John Chandler, Curtis Price, Jerilyn Roberts, Sarah Keenan, Kayleigh Johnson, Tim Masterlark, Kurt Katzenstein, Roger Nielsen, Darrin Pagnac, Kyle Hughes, Rob Hall, Mark Bowron, Nathaniel Fox, Scott Cooper

Virtual Attendance: Clint Boyd, Bill Eldridge, Liangping Li, Sherwin Artus, Jeanne Goodman, Yi Fang, Emily Berry, Nate Fox, Chris Pellowski, Joy Lester

8:30 - Welcome by Steve O'Rourke: Reflections on the fact the world is changing quickly in natural resource areas with impacts for industry and the school.

Laurie Introductions - New faces: Mark Bowron, Rob Hall (Mining HUB)

9:00 - Approve Minutes from the last meeting. Dave Hammond motions to approve, Barbara Nielsen seconds, all in favor, no discussion.

8:50 - Welcome from SDSM&T President Dr. Jim Rankin:

- **Enrollment:** Overall registrations are up 28% with an acceptance rate of 90%, so seeing growth over that couple of years.
- **New:** Provide a minor in business; Departmental change with merger of EE and CSE, Jeff McGough to be the department head; developing a new academic/hybrid advisor model; Office for Professional Education, Andrea Birkley Director (andrea.brickey@sdsmt.edu); coming soon the Office for Faculty Development; ABET accreditation upcoming for geology.
- **Board of Regents:** Issued an "Opportunity for All" statement, focused on 1) student success, 2) student support and 3) counseling. SDSM&T website link is <https://www.sdsmt.edu/Opportunity-For-All/>.
- **Senate Bill 55:** Requires combining resources across universities for cost savings. Includes new food service provider; combined travel coordinator with BHSU; will include some combined teaching opportunities.
- **Funding:** Across the university there is a good diversity of funding sources. Including many new and ongoing collaborations with the Department of Defense and Ellsworth Airforce Base.
- **Award Recognition:** NSF early career award Dr. Wang; NSF award Dr. Ustunisik; NASA award Dr. Duke.
- **POET:** Bioproducts research collaboration with building groundbreaking at SDSU.
- **Construction:** Library completion July 2022, includes coffee shop, 3-D printers, and tutoring; New Mineral Industries Building, will now be located on the quad directly across from O'Harra building; Surbeck expansion; ASCENT Innovation Building.
- **Spring Commencement:** May 7th, with former Rapid City Mayor Donald Barnett to receive an Honorary Doctorate for his work during and after the 1972 flood.
- **Questions/Suggestions for Dr. Rankin** – Mr. Price suggested providing more financial aid to graduate students by not requiring tuition for students receiving a stipend, received with general approval by the group; Dr. Ustunisik suggested providing student insurance, received with general approval by the group; Rob Hall noted that research

per capita is doing very well, Dr. Rankin noted that there has been an increase in intellectual property. Barbara Nielsen notes that with the help of SME a bill to provide financial assistance to mining universities made it to the floor of congress and would provide \$10 million for eight years.

- **In closing:** Jeanne Goodman notes and thanks Dr. Rankin for his work during the legislative session. His presence made the difference on passing the Ascent funding bill with fifty-four votes. The meeting members also thanked Dr. Rankin and he in return thanked the committee and faculty for their work.

9:06 - Paul Krueger (CEO CARA): **CARA** (Center for Alumni Relations and Advancement) has an ongoing fundraising goal of \$100 million dollars included \$12 million for the MI Building. The location of the MI Building has changed due to the cost of excavating the earlier suggested site. Currently have \$7.1 million dedicated to the MI building. Future dollars include nearly \$5 million from Newcor in monetary and material support. Likewise, Pete Lien and Sons to provide concrete. The process forward looks great. Noted that the Dr. Paul Gries memorial will need to be moved, those of us in the audience who knew Dr. Gries note that he would be the first to approve the relocation.

Field Station updates: waiting on a signed gift agreement. Steve O'Rourke notes this has been slow due to appraiser and survey issues.

Surbeck: \$2 million of the needed \$6 million has been funded.

New: John Chandler from the Denver area is joining CARA.

9:15 - 9:25 Break

9:25 - Laurie Anderson - **Department updates:** Slides are attached to these meeting minutes. There will be youth summer camps this year.

A surprise, large estate gift is in the works. Faculty provided one-page descriptions of research proposals for the estate holder, and they were impressed with these ideas and expanded the research/estate possibilities. These include research in support of ecosystems and geology of the Badlands research and Black Hills. The funding would be for both student and faculty projects.

Museum has been remarkably busy, and their income has increased and will provide funding for students.

Current Goals are pushing on toward ABET accreditation.

Slides with all the additional details on the important things going on within the department are attached to these meeting minutes.

9:50 – Kyle Hughes - **Nemo Quarry design project.** Mr. Hughes is a senior in the mining depart with design project to help develop a plan for the Nemo Quarry located one mile south of the unincorporated village of Nemo. CARA is the “receiving entity” with lease to GGE as the “utilizing entity” for field camps from mid-May to mid-August. Budget is 4-4.5 million.

Design findings: Slope of 17-19 degrees on the northern six acres (where the building is to be placed) will add to the building cost.

Stream crossing considerations include using two ten ft diameter culverts or a box culvert to meet most flow situations (not a 1972 flood). A bridge would increase costs and add maintenance.

Southern benches will continue to be mined for the next 8-10 years.

Questions contact Kyle via email at Kyle.hughes@mines.sdsmt.edu.

Discussion: Dave Hammond - Will Kyle stay involved with the project? Kyle – Had not thought about it – Maybe? Curtis Price: Need assessment of flow for both one hundred year and max flow events for design. Prompted round table discussion on adequacy of overflow and backup. Noted further gift of the southern benches after mining and reclamation.

Dave Hammond – is there a timeline? Steve O'Rourke – no real timeline, there are some permitting issues and right now the new MI building takes precedence.

10:13 – Rob Hall, **Mining Hub**, (<https://www.sdsmt.edu/Academics/Mining-Hub/>); Seven companies are current members, provides funds for funding research with the members getting together virtually to decide on what project. Current members include Amazon, AWS, Caterpillar, Hecla, NevadaGold, Skycath, and Teck. Members have distinct levels by cost per year. Discussion: good for graduate research if the data is not proprietary so the students/faculty can publish; a competitor is the University of Arizona; research driven by industry needs; only 10% overhead; wide research application, AI, environmental, CO2 reduction, drilling, survey, and critical minerals.

Laurie Anderson – A new line for professorship is “Professor of Practice”, from industry research and industry liaison, this is in the process of being developed.

10:38 - 10:45 **Break**

10:45 - Laurie Anderson; Admissions – yield 50-60% from Acceptance to actual registrations.

- Barbara Nielsen – why more GEO than GEOE?
- Kurt Katzenstein – possibly because engineering has a more difficult program

Laurie Anderson – Fewer withdrawals of applications for graduate students

Persistence and retention

Persistence year 1 undergraduate fall to spring better than school average

Retention year 1 to 2, 45% stay in major

Discussion (various):

- Add ABET to student curriculum a component of inclusiveness
- Faculty can help provide inclusion and equality
- Would GEO PG be beneficial in South Dakota?
- Paleo has been generally stable
- Be careful of statistics used with small sample counts

11:05 – Steve O'Rourke – **IAB Business Meeting - Committee Reports**

Sarah Keenan – **Museum Committee Report** – Working on improving exhibits, adding social media content (TikTok), providing summer internships including Wind Cave Park (2-4 students).

Discussion (various):

- focus on exposure, jobs of the future, examples Brooks and Nelson videos, student example “What’s inside that rock”.
- Laurie – example Tim Pierce (TikTok) snail video

11:22 – Larry Stetler – **GEOE Committee Report** – Please refer to GEOE committee documents and survey sent earlier. Review of surveys. ABET review this coming fall. Course changes related to other departments like Civil Engineering dropping some courses. Addition of an Introduction to Geomechanics class. Name change for course from Drilling and Production Engineering to Geothermal and Production Engineering. This highlights the multiple

applications of this course. Senior design project moved into Engineering Geology field camp due to enhancements of newly focused nature of the camp on project design. This has been done through the hard work of Drs Stetler and Katzenstein over the last few years.

Dave Hammond – Will need to be clear in the ABET application that Senior Design is included in the curriculum via this field/design class.

11:33 – Laurie Anderson – **GEOL Committee Report** – Committee met on Friday, March 25, 2022. Committee meeting minutes provided via by Chris Pellowski. Reviewed surveys of recent alumni, employers, and advisors. Please refer to documents sent earlier. General notes/suggestions from surveys; increase professional development, Department provides a strong technical education. Suggestion for PEO's is add wording to leaders in workplace, ASBOG exam, core logging class, more communication skills, information and opportunities to obtain Professional Geologist licensure (test site are being developed locally). Discussion: There is an endowment for PG Exam to offset cost of preparation materials. Note PG licensure not required in South Dakota.

11:45-12:30 **Lunch**

12:30 - Kayleigh Johnson and Jay Nopola – **Messaging Committee Report** –

Objectives: 1) How do we improve admissions? 2) How is our message conveyed?

Mission: prepare students for careers

Admissions: accepted over the last eight years 60% GEOL, 40% GEOE

Survey: Motivations for students to pursue geosciences: Passion/interest 62%, Career 10%, Mentor 8%

- Students drawn from nearby states but also Texas and California
- Family advice and internet presence are particularly important

Discussion (open): university recruiting important, CSM does significant “sales” in high school; comparison of what alumni were schooled in and where they are now working, school provides a broad background and work opportunities from resources to environmental to hydro.

Survey (cont.):

- Perception of GGE: 1) positive image of Faculty and Staff, 2) significant personal/professional value
- Strengths and Unique traits: 1) faculty and staff, 2) curriculum, 3) hands-on, 4) location and 5) sense of community
- How can GGE improve: 1) new building, 2) department and field camp websites need updating, 3) add inclusiveness statement to department website, 4) curriculum changes, 5) more professional guidance and development.

What are other schools doing? Providing information on careers in geosciences, environment and social responsibility statements, diversity, and inclusiveness statements.

Dave Hammond – GGE should capitalize on ABET accreditation, engineering now and geology coming next year.

Committee recommendations:

- Website improvements (homepage, field camp, and navigation through website)
- Increase advertisement and recruitment (focused ads)
- Campus culture (inclusiveness and diversity)

- Highlight curriculum and new courses

Discussion:

Joy Lester – add video of testimonials on webpage

Kurt Katzenstein – add how your career path can evolve.

Laurie Anderson - webpage is managed by admissions not GGE; marketing also driven by admissions and their budget, but these data are much needed in future discussions to get the website updated.

Kayleigh Johnson and Jay Nopola – one update would be to have the university webpage cut down the number of words, streamline the webpage.

Dave Hammond – Where do we go from here? Can the Messaging Committee continue and follow-up on some of these ideas?

Barbara Nielsen – Do other departments have these issues?

Laurie Anderson – These webpage issues are likely shared with other departments.

Nuri Uzunlar – Field camp website is continually up to date with the pricing of the courses.

Open discussion period...Numerous participants. Lots of back and forth!

1:00 – Laurie Anderson – **Advisory Board Charter revisions** (under Old Business)
These were sent via email to all members and faculty via email (see this email for details).
Some changes include changing the standing committees to include adding GEOE ABET accreditation, GEOL ABET Accreditation, Messaging and retiring Energy Research Initiative Steering Committee, and Field Station.

Gokce Ustunisik motions to accept the charter revisions, Dave Hammond seconds the motion.
Motion is approved.

New Business

Steve O'Rourke – **New Member**

Vote on new member Mark Anderson, resume provided, those speaking highly in favor of the candidate included Laurie Anderson, Dave Hammond, Nuri Uzunlar, Larry Stetler, Steve O'Rourke and others.

Larry Stetler motions to accept Mark Anderson to the Board, Sarah Keenan seconds the motion.
Motion carried.

Laurie Anderson – **Board Member renewals:** Jeanne Goodman, David Hammond, Paul Murphy, Barbara Nielsen, Steve O'Rourke

Scott Cooper motions to accept all renewals, Nuri Uzunlar seconds the motion. Motion carried.

Deep Dives Discussion

Laurie Anderson – what deep dive data would the board and faculty like to discuss for the next Advisory Board meeting?

Larry Stetler – can the next meeting be scheduled after the ABET campus meeting?

Dave Hammond – will likely know the date of the ABET meeting after June.

Steve O'Rourke – the world is changing with a significant green challenge, nevertheless petroleum, coal, and metals very much needed as the future unfolds. Recognize the legal requirements for sustainability and the environment for public offering.

Curtis Price – Sustainability is a topic of discussion and collaboration across departments.

Open discussion: What is needed to meet this challenge – technologies new and developing. One deep dive example is CO2 sequestration. How do we drill it? How do we keep it in the ground? Requires geophysics, geochemistry, rock mechanics, drilling, environmental sciences, a wide variety of knowledge bases and technologies and a focus on geo-ethics. Also requires visiting the politics of resources and societal needs, including critical materials. Needed energy transition technologies. Beyond NIMBY is the transition to understanding there is more oversight if it is in your backyard. Environmental ethics, industry ethics, international ethics, geoethics all discussed.

Laurie Anderson – geoethics not provided as a separate class but provided as a topic in several classes and can be listed in the course descriptions.

Steve O'Rourke – Forward thinking, and a broad scale view required on the future of natural resources and society needs.

Darrin Pagnac and Nate Fox – paleontology has a lot to add to offer including understanding past climate change and conservation paleobiology.

Nuri Uzunlar – Field Camp Report

- Numerous camps canceled over the last couple of years due to covid and associated international travel restrictions.
- This year international camps are scheduled including Turkey, Spain, France, Iceland
- 270 students registered for 2022 camps so far this year with registration still open for international and domestic camps.
- Camps are continuing to fill.
- For comparison, 261 students total in 2021 for all camps.
- Ranch A – no opportunity to rent that camp.
- School of Mines dorms will be utilized, but not a field camp atmosphere.

2:20 - Election of Officers

President - Dave Hamond nominated Steve O'Rourke for President, seconded by Gokce Ustunisik, unanimously elected

Secretary – Dave Hammond self-nominated for Secretary, seconded by Barbara Nielsen, unanimously elected.

Closing discussion

Steve O'Rourke – Goal is to be supportive of the department.

Open discussion:

Based on a question by Kevin Ward - Discussion at this point moved toward - what about basic research vs application-based research? General points from that interaction/discussion are summarized below:

- Fundamental/basic research is still of great needed
- Receive longer term solutions from basic research
- Longer term what do we need to look at vs immediate needs
- Example – CO2 initial experiments needed to figure out what is going on. The fundamental interactions of various rock types and fluids with CO2. Allows us to do more environmentally friendly geology.
- Basic modeling by every group needed
- Big data requires enhanced machine learning

Steve O'Rourke – We in industry respect basic research because that is where future solutions come from.

2:15 - Meeting Adjourned - Steve O'Rourke and Laurie Anderson – Thanks to everyone for their participation – meeting adjourned and moved into Executive session.

Submitted by Scott Cooper 3/29/2022



1

GGE: What Are We Up To?

Clint Boyd, New Exhibit NSGS

Dr. Ustunisik tectonics, carbon cycle and climate change (NSF funding)
Promotion to Assoc Prof in Fall 2022

Drs. Keenan and Beeler:
NSF EAR/IF Ion Chromatography (SD Mines & OLC)

Dave Hammond, Distinguished Alumnus

Summer Camps: Drs. Katzenstein, Keenan, Pagnac, Waldien, Ward, and Beeler

Co-op Student Achievement Award
Graydon Olson (BS GEOE)

Graydon Olson (BS GEOE)

Dr. Masterlark
Tsunami Genesis (NSF EAGER)

Meritorious Honor Award (U.S. Department of State)

Estate Gift for Badlands Research Endowment \$1M-\$3M

GGE at SURF

2

Museum: What Are We Up To?

Item	FY21	FY21 as of Jan 2021	FY22 as of Jan 2022	Difference
Attendance	20,106	9,465	16,864	+7,399
Gift Shop Earnings	\$70,763	\$30,130	\$50,689	+\$20,559
Tours	102	47	59	+12
IDs	213	94	100	+6
Volunteer Hours Lab	2,211	359	320	-39
Volunteer Hours Collections	845	338	283	-55
Student Research	16	16	17	+1
Research Visits	14	8	8	--

3

FY22 Operating Budget: Investments

- TA expenditures are over by ~\$3K, not by \$56K, in FY22
 - With new funding model for GAs: nearly covered basic needs
 - In future: more support for graduate students, lighter lab load for faculty
- Purchased 3 Additional Petrographic Microscopes in order to be able to increase class section limits for GEOL 212/L and GEOL 341/L (cost: \$18K)
 - More efficiency and flexibility in course offerings
- Purchased 5 (but had to return 2 b/c of—old MI building infrastructure issues) short-throw projectors for lab classrooms (net cost: ~\$9.6K)
 - Teaching Infrastructure improvements that can be migrated to New MI building
- Booth rental and travel for 2 conferences for Graduate Recruiting (cost: ~\$7K)
 - Support graduate recruiting efforts for faculty attending these meetings
- Online advertising of MI programs (total ~\$5K)
 - Recruit undergraduates to MI departments
- Yellowstone Field Trip (co-sponsored by BHNSFS and GGE; total cost \$4.25K + faculty volunteers)
 - Many new students (both freshmen and graduate students) attend
- GIS Search (cost to date \$2.5K)
 - Geospatial offerings—with strong science and engineering applications focus—a unique strength of GGE programs

4

Goals for the Future

Academic & Co-Curricular Excellence

- Initiative 1: Implement results of graduate program assessment
- Initiative 2: Achieve accreditation renewal for GEOE and initial accreditation for GEOL through ABET commissions

Research & Innovation

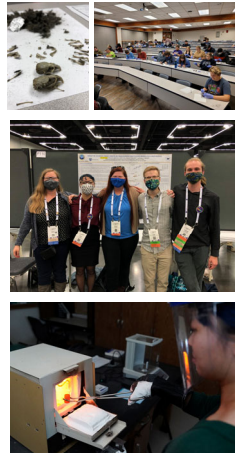
- Initiative 1: Achieve and maintain RA support at a level that funds TA needs through the new budget model
- Initiative 2: Expand geochemistry, geomechanics, and geo-modeling capabilities through start-up, grants, and partnerships (Mining Hub; Data Science)

Outreach & Engagement

- Initiative 1: Increase from 2 to 4 Youth Camps led by GGE faculty (2 already waitlisted)
- Initiative 2: Completion of donor estate gift agreement to fund Badlands research

Campus Culture

- Initiative 1: Support (faculty time and departmental funds) Fall and Spring field trips for all
- Initiative 2: Revisit graduate application review process to ensure and promote fair and equitable admissions decisions



5

FY22 Operating Budget: Investments

- Gift shop sale increases
 - Able to use to support student worker salary and more public floor expenses (exhibits upgrades, advertising, hands-on activities)
- Major expenses and investments with state funds FY22
 - Freezer issues ... don't ask
 - New SD Geology floor map
 - Lab Benches for new NSF funded geochemistry instrumentation
 - Classroom upgrades
 - Funds from Provost to buy chairs!
 - Student labor in
 - Exhibits (self support),
 - Collections (mostly private funds),
 - Preparation (mostly state support)
 - Software Licensing and Memberships for collections catalogs
 - Radioactive (~\$2,500/yr) and Paleobotany purchasing
 - Photogrammetry and 3D scanning capabilities for student and faculty/staff research



6

Goals for the Future

Academic & Co-Curricular Excellence

- Initiative 1: Make labs in PRL more accessible to students (HEFF proposal submitted)
- Initiative 2: Field trips in classes: exhibit design, paleoenvironments, field methods

Research & Innovation

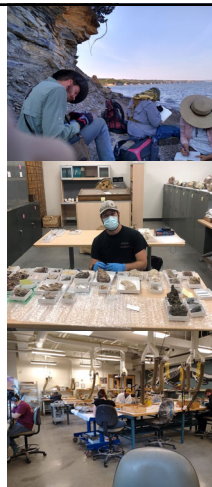
- Initiative 1: Submit collections grant for mineral collections
- Initiative 2: Achieve collections grant for vertebrate paleontology

Outreach & Engagement

- Initiative 1: Exhibits and educational outreach strategic planning and implementation

Campus Culture

- Initiative 1: Security cameras for exhibit hall
- Initiative 2: Make Museum library more accessible



7

Admissions (Undergraduate) as of 3/2/2022

	Fall 2020	Fall 2021	Fall 2022	Change ('21-'22)	Raw # Change ('21-'22)
Freshmen Applications					
GEOE	17	21	17	-19.0%	(4)
GEOL	53	40	62	55.0%	22
Freshmen Acceptances					
GEOE	15	15	13	-13.3%	(2)
GEOL	40	26	46	76.9%	20
Course Registration Forms					
GEOE	6	1	5	400.0%	4
GEOL	14	8	24	200.0%	16

Transfer Registration Forms					
	Fall 2020	Fall 2021	Fall 2022	Change ('21-'22)	Raw # Change ('21-'22)
GEOE	1	0	2	#DIV/0!	2
GEOL	1	1	0	-100.00%	-1

8

Admissions (Graduate) as of 3/10/2022

	Fall 2020	Fall 2021	Fall 2022	Change ('21-'22)	Raw # Change ('21-'22)
Graduate Applications					
GGE MS	10	9	21	133.3%	12
PALE MS	17	14	22	57.1%	8
GGE/MEM PHD	6	8	5	-37.5%	(3)
Graduate Acceptances					
GGE MS	4	2	10	400%	8
PALE MS	8	0	9		9
GGE/MEM PHD	4	1	2	100%	1
Graduate Acceptances less withdrawn apps					
GGE MS	4	2	10	400.0%	8
PALE MS	8	0	9		9
GGE MEM PHD	4	1	2	100%	1

9

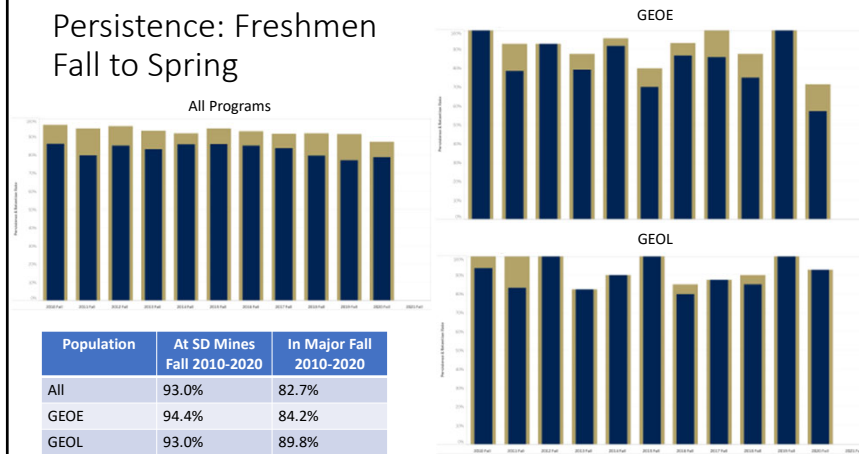
Student Persistence & Retention

Definitions:

- Initial Cohort: Starting class of Freshmen for each Fall semester
- Persistence Cohort: Students enrolled the next academic term (excluding summer)
- Retention Cohort: For 2nd, 3rd, and 4th Year Retention, students enrolled in the corresponding like term 1, 2, and 3 years after their first term. (e.g. for 2010 Fall the 2nd Year Retention cohort would count students enrolled in 2011 Fall)
- In Major Persistence/Retention Cohort: Same as the Persistence and Retention Cohorts, but only include students that are enrolled in the same program as their Initial Academic Program.

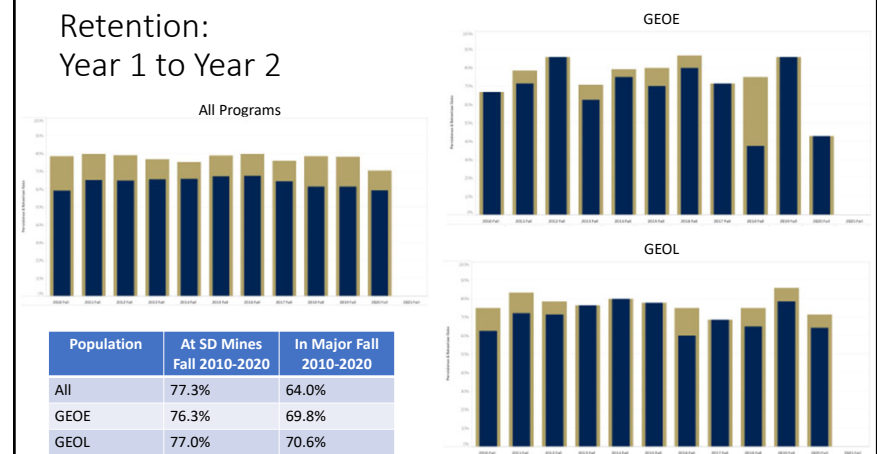
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Persistence: Freshmen Fall to Spring



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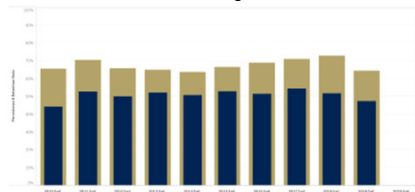
Retention: Year 1 to Year 2



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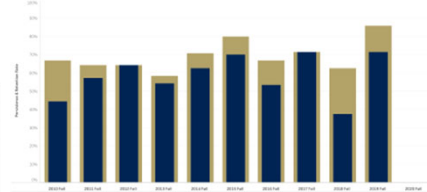
Retention: Year 1 to Year 3

All Programs

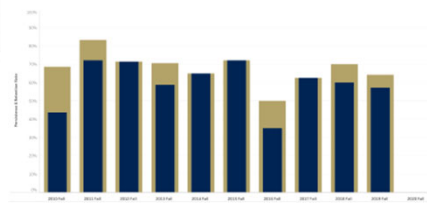


Population	At SD Mines Fall 2010-2019	In Major Fall 2010-2019
All	67.3%	50.8%
GEOE	67.4%	58.3%
GEOL	67.6%	59.5%

GEOE



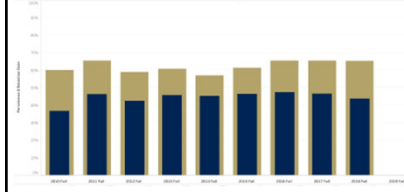
GEOL



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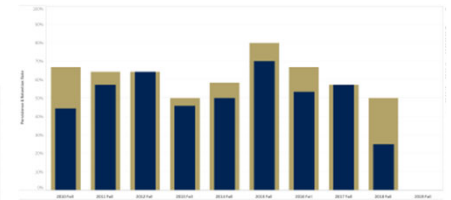
Retention: Year 1 to Year 4

All Programs

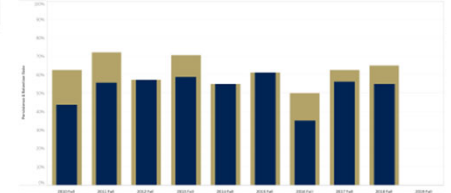


Population	At SD Mines Fall 2010-2018	In Major Fall 2010-2018
All	62.1%	44.7%
GEOE	60.8%	52.0%
GEOL	61.6%	52.8%

GEOE



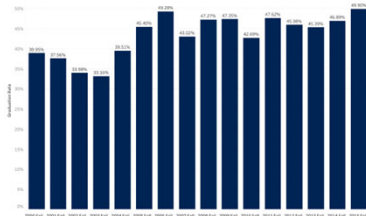
GEOL



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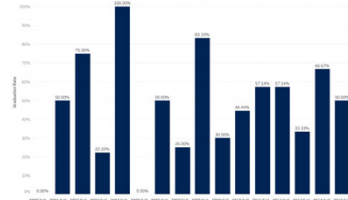
6-Year Graduation Rate 2000-2015

All Programs

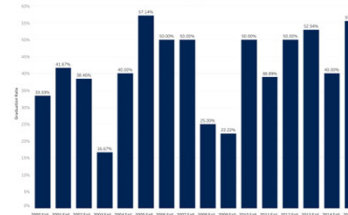


Population	Fall 2010-2018
All	43.5%
GEOE	48.2%
GEOL	43.2%

GEOE



GEOL



15

Graduation Rates Graduate Programs

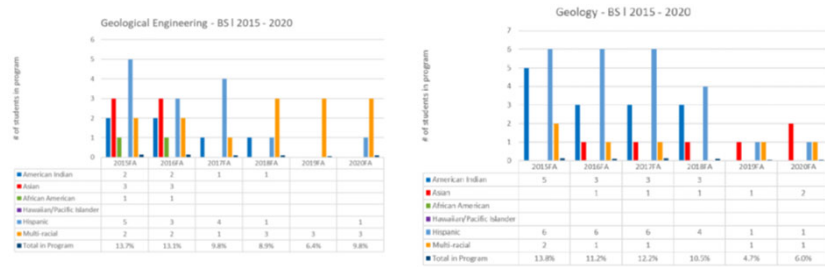
- Years of Entrance: 2011-2012 to 2021-2022

Program	Total Cohort	Completed	In Progress	Inactive	Pre-BS	Terminated	Transferred	Percent Completed	Percent complete less in-progress
MS GGE	70	51	8	7	1		3	72.9%	82.3%
MS PALE	46	25	12	6		3		54.3%	73.5%
PhD GGE	39	16	11	10			2	41.0%	57.1%

16

Demographics: Minority Domestic Students

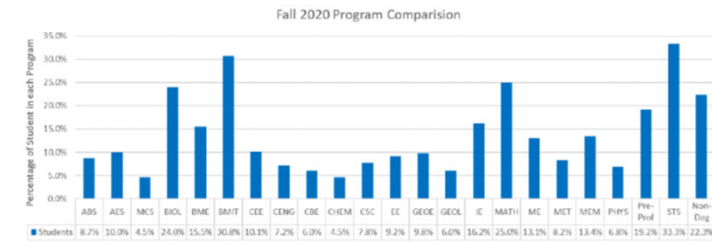
- See: <https://www.sdsmt.edu/Campus-Life/Office-for-Inclusion/Diversity-Report/>



17

Demographics: Minority Domestic Students

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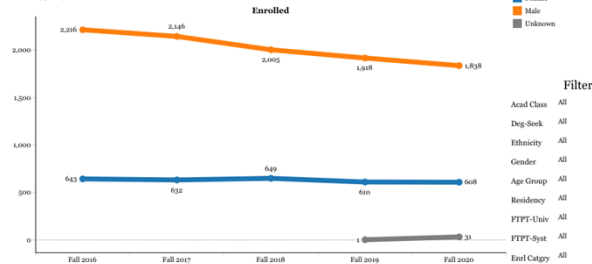
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Gender: Grads and Undergrads 2016-2020

SDBOR Fall Enrollment Dashboard..

Headcount - Enrollment in Any Section

(Click any point for detailed data)



FTE of Selected Students, All Locations - None
(Date: FTE categories are not mutually exclusive)
(Click any point above to activate)

University
SDSMT

Show Lines for
Gender

Show Graphs for
Enrollment in Any Section

Female
Male
Unknown

Filters

Acad Class All
Deg-Seq All
Ethnicity All
Gender All
Age Group All
Residency All
FTPI-Unit All
FTPI-Dist All
Enst Category All
Subgroup All
Funding All

19

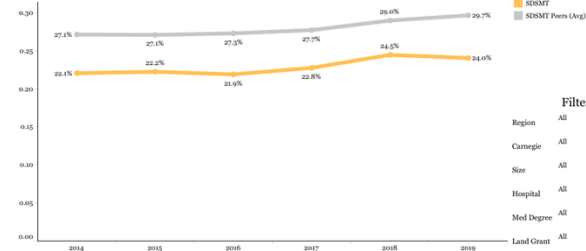
Percent Women: Grads and Undergrads 2014-2019

SDBOR Peer Analysis Dashboard

IPEDS Data for Public Four-Year Universities

Trend for Enrollment: Percent of Total - Women

(Click any data point to see detailed data; shows group averages by default)



Institutional Detail
(Click any data point above to activate)

Total universities
in current view: 4

SD Mines Peers:
Montana Tech
Michigan Tech
Missouri Tech

Filters

Region All
Carnegie All
Size All
Hospital All
Med Degree All
Land Grant All

20



The Mining Hub

Current Members

- Agnico Eagle
- Coeur Wharf
- Dakota Gold Corp
- Hexagon Mining
- Peabody Energy
- Pete Lien & Sons
- Respec

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21



The Mining Hub Potential Members

- Amazon AWS
- Caterpillar
- Hecla
- Komatsu
- Nevada Gold
- Skycath
- Teck

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22



Mining Hub Membership Model

Benefits Cash cost per year for membership	Bronze \$5,000	Silver \$10,000	Gold \$25,000	Platinum \$50,000
Access to all non-confidential research reports	x	x	x	x
Participation in annual meeting	x	x	x	x
# Votes for Board Membership	1	2	3	5
# of employees eligible for free professional development course	0	0	1	2

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23