

Minutes – GGE Advisory Board Meeting, 19 September 2020

In attendance via ZOOM (teleconference):

GGE Advisory Board: Sherwin Artus, Stuart Buchholz, Janet Carter, Scott Cooper, Bill Eldridge, Andy Farke (notetaker), Jeanne Goodman, David Hammond, Joy Lester, Barbara Nielsen, Steve O'Rourke.

Unable to attend from board: John Chandler, Paul Murphey, William Siok

GGE Department: Laurie Anderson, Zeynep Baran, Edward Duke, Nathan Fox, Kurt Katzenstein, Sarah Keenan, Liangping Li, Darrin Pagnac, Chris Pellowski, Curtis Price, Foster Sawyer, Larry Stetler, Gokce Ustunisik, Nuri Uzunlar, Kevin Ward.

Foundation and Administration: Jim Rankin; Lance Roberts; Elizabeth Sailer.

Began at 8:30 am

Laurie Anderson called to order.

Welcome to Nate Fox, new associate director for the museum.

Minutes from Spring 2020 meeting presented. No discussion of minutes. Motion from Steve to approve. Seconded by Jean. Unanimously approved.

Agenda reviewed by Anderson. Sharon Chontos not present, unable to be here today. Sherwin not here (arrived a little bit later). Paul Murphey not here.

Presentation from President Jim Rankin. Currently M-Week, but very different from usual. COVID-19 still affecting campus. Numbers good for now. Level-3 masking (indoor spaces when around others) still in effect. Some changes to calendar, with some holidays now workdays, and in-person classes completed by Thanksgiving. Decisions on commencement, etc., to be made later. Reviewed faculty/admin changes and promotions. Hiring still looking good, but internships were greatly impacted, with many students losing internships. Virtual career fair coming up. Devereaux Library renovations moving forward. Mineral Industries (Sustainable Earth Resources?) building still in process. Board of Regents included this in budget request, with lobbyist hiring in process by Mines. Many steps still to do, but movement is happening. Senate Bill 55 may affect BHSU and Mines. All institutions of higher ed being reviewed, with meetings beginning in October. Some concerns about how this may change Mines, its independence, etc. Question from Farke – how have admissions / retention been affected? Rankin answers that ~3% drop (not officially announced numbers yet), but far less severe than initially feared.

Presentation from Lance Roberts: Updated on efforts from faculty / staff to prepare for this fall. Many faculty took course on online education, online content delivery, etc. Semester seems to be going as well as could be hoped for. Around 500 sections are delivered online this fall! Many courses have at least some online component, even for those with heavy in-person component. Faculty have been navigating restrictions of faculty / student quarantines as they happen. Online career fair coming up (as outlined earlier). Question on vaccine for COVID-19, from Kurt. Answered by Rankin – vaccine may be strongly recommended, but not likely to be required. Gokce asked if testing will be ramped up in the future for campus. Not certain. Students on campus seem to be very pro-active, which helps university get to contact tracing quickly. May be looking at expanding on-campus testing at some point, but this is

still in planning stages. Working very closely with SD Dept. of Health and Monument Health in Rapid City.

Liz Sailer gave update on CARA (merger between Foundation and Alumni Association). New organization formed – Center for Alumni Relations & Advancement – as of July 1, from merger. Around \$300k raised for student emergency fund. Many applications received, many students assisted. Moving forward, starting to look at getting back on the road for small-scale in-person meetings.

Laurie Anderson then gave update for GEOL & GEOE departments. Gave overview of alumni, faculty, and staff in the news. Lots of positive press from PBS Prehistoric Road Trip series, which aired recently.

GGE Placement: 2018/2019 placement quite good. 86% (steady) for GEOL B.Sc., 100% for other degrees. 5 year average also quite good (88% to 100%, depending on program). Starting salaries have largely recovered from downturn in 2016. Historically, GEOE's were above average for SDSM&T, but now slightly below. FY20 funding is a little lower than in past, but an uptick from last year. COVID-19 has impacted research, in addition to education. From early March to early Summer, many had time on campus limited. This impacted graduate students also, who could not travel, do fieldwork, etc. One student lost research assistantship, because their work could not be completed. Recent publications presented by faculty. Liangping Li was co-author with graduate students Jichao Bao and Fledora Redolosa, in *Journal of Hydrology*. Sarah Keenan published in *PLOS ONE*, with colleagues from U Tennessee. Gokce Ustunisik had invited paper in *Frontiers in Earth Science*, with lead author of Kristin Lewis (recently graduated M.Sc. Student).

Laurie presented overview of strategic goals for 2020-21. Many faculty participated in online professional development over the summer, to better prepare for fall semester. Creative solutions being sought. Adapters for smart phones purchased for petrology lab, to allow students to record images from microscopes. Some priorities for strategic goals have had to change, due to COVID-19. Academic & Co-Curricular Excellence: Geology B.Sc. Is planning and implementing activities to prepare for ABET accreditation. This includes collecting data for assessment. ABET committee meeting for advisory board will be on agenda for the spring meeting, most likely. Looking closely at undergraduate recruiting, also. Research & Innovation: looking at ways to increase external grant funding for RAs; will also assess graduate program offerings, and how to meet slight trend for decrease in enrollment. For Outreach & Engagement: Seeking funding in several areas, including Geo-EPICS and Geo-PATHS. Proposals submitted and pending. Want to engage outstanding alumni with students, once more on-campus events are possible. Campus Culture: Engaging department salons along strategic plans themes. So far, had one on expanding inclusion in the geosciences. Coming up, looking at graduate student recruiting. Coming up: 2 faculty searches to replace Zeynep Baran and Foster Sawyer. Looking ahead to MI Building renovation, and permanent Black Hills field camp facility.

Nuri Uzunlar gave update on field camps: Nearly all, except 1, were canceled. One was done in late June / mid-July, with hybrid field camp. First credits taken on-line, the rest were done in person. 30 GEOL students (including SDSM&T and those from other institutions), along with GEOE (note: GEOE camp all online). GEOL students went out to field for 2 weeks. Eight students in GEOE did further projects. 59 students took course in total. Number of generated credit hours for 2020 down by ~50%, same for revenue. Moving forward, some field camps will be modified or offered online. Depends on local health restrictions. Some in-person camps are full already. Great demand for field camps still, especially as other schools reduce or eliminate field camp programs.

Curtis Price presented updates on GGE Geospatial happenings. New GPS devices purchased with grants and other funds. MOU with Western Dakota Tech College allowed major cost savings to have better hardware and software access. Reduces need for rentals, and hopefully builds bridges for future collaborations and recruiting.

Laurie Anderson next presented 2020-21 strategic goals for the museum. Darrin teaching new field methods course for GGE, to enhance undergrad curriculum. Plans for graduate course field experiences delayed for now. Grant proposal in for IMLS to augment online presence of museum around geology/paleontology of the region, with Lakota content. This proposal is still pending. If not funded, another avenue of funding is in mind. Public floor of museum closed until July 6. Traffic ~50% of normal tourist season. AAM accreditation recently received. New goals to work on: developing training infrastructure and marketing to enhance volunteer corps. Working on fundraising / grant proposal to enhance mineral collection inventory; will also look at inventorying petrology collection. Next, summary of budgets. Some budget cuts – 25% of operating and 25% of TA budget for GEOL/GEOE. A successful year, though in recruiting graduate students. This means additional money needed to be found to cover graduate assistantships. Funds on-hand can be used as a temporary solution to fund students, but not long-term solution. Museum also had budget cuts, along with store revenue decrease. Foundation report presented, with full information on slide.

15 minute break.

After break, Laurie noted that slide with enrollment trends will be sent out after the meeting. Enrollment declining, but not as steeply as before. Master's GGE down, Paleo up slightly, Ph.D. program increasing.

Dave Hammond had question about how to do outreach/engagement, and how alumni can be involved. Laurie said that some of outstanding alum awardees have participated in this with the students.

Moved on to IAB Business meeting at 9:24.

Nomination of Clint Boyd presented (to replace Jim Mead, who had to step down early). Some discussion about future of board composition (composition of industry, academic, etc.). Scott motioned to approve nomination, Dave Hammond seconded. Approved, motion passed.

Discussion of board composition followed. 15 people. In general, tries to cover all areas where students are employed in. Also, need to have representation relevant to museum, for AAM accreditation. Anyone can nominate or bring name to the faculty. Faculty bring nominations to the board for election. Additional discussion about value of having a faculty member from another institution, or having someone with association with DOE or DOD. Laurie closed this section with saying that suggestions for nominations should be forwarded to her, for additional consideration.

Jon Kellar (Materials & Metallurgical Engineering) interested in getting critical minerals training grant via NSF, with collaboration with GEOL/GEOE. Will be discussed at future faculty meetings. Some discussion about this and related funding in this area. Curtis Price noted that people in relevant fields can help with campus seminars, etc.

Next, moved to discussion of Strategic Goals. What is the role of the advisory board in moving this plan forward? Opened for discussion. Question about future field station facility. No major changes since last to report. Lance Roberts has been doing some background work relative to this recently, but nothing to report at the moment.

Question about timeline of faculty hires coming up, to replace Zeynep Baran and Foster Sawyer. In progress. Plan at the moment would be to replace one in general geological engineering, the other in

the area of tectonics (with ability to teach structural geology). Areas such as soft rock geology, etc., would be covered as needed with existing faculty. Note from several that having someone who can interface with industry / petroleum / etc. is important for the future. This will need to be balanced against relatively small hiring pool, so don't want to narrow position too much. Will need to balance future of department, future needs, future directions of industry, etc.

Took 10 minute break. Discussion of faculty hire continued some after break, briefly.

Next question – what other strategic priorities might be important to consider, including those not on the current departmental priority list?

What lessons from COVID-19 teaching days will inform the department's future priorities moving forward? Speaking as a faculty member, Gokce mentioned that for her classes, she has been doing lots of preparation for digital labs, etc. Kurt Katzenstein mentioned that he has changed his personal philosophy; some things can be done well virtually, with careful thought and planning (but some may not be). He is not as reticent to teach online. Nuri Uzunlar relayed some anecdotal data from students...some aspects of class are improved, others are not.

Jeanne Goodman noted that it is important to apply skills learned. What have we learned, how do we apply it to a real-world situation? This works well in some online classes, less well in others. It is a good fit in some courses, less so in others. Some areas of licensing involved – cannot do correspondence courses, can do asynchronous courses. Student interaction / teacher interaction very critical for online courses.

Laurie mentioned that a bright spot from the COVID-19 days has been an assessment of how to broaden means of instruction, expanding accessibility of course, expanding course offerings across departments for distance programs. Some methods implemented by necessity – such as partially online field methods course – may be used going forward, and improved and formalized in the future.

Next question for discussion from Laurie – how to expand graduate student enrollment? Funding is a key factor – how do we fund students? Thesis vs. non-thesis option? Thesis can be important for research/academic; non-thesis option may make more sense for applied fields. But, how do potential employers view this? Where do students get communication skills, etc., without thesis? Capstone design projects may be an important aspect, at least for what ABET / industry see. Individual smaller-scale projects, together as part of the broader program, may be an appropriate equivalent to the thesis for non-thesis students. These smaller projects, together, can help provide skillsets normally provided by the thesis.

Joy Lester asked where drop-off in enrollment occurred? Laurie mentioned that interest in paleontology has always been high, but in the past quality of applicants was variable. For GEOE, many master's applicants have been students continuing at Mines from undergrad. These numbers are still on small side, and not many external applicants. For GEOL, this program has had contraction as past students graduate and new students aren't replacing them. Some of this is due to retirement / departure of faculty who were taking on many students. On the undergrad side, Kurt notes that 70% of students are interested in paleo within program, but not necessarily broader geology.

Meeting concluded at 12:38 pm.