Colorado School of Mines – FACULTY SENATE MEETING MINUTES
March 28, 2:00 – 4:00 pm, Guggenheim Boardroom and Zoom

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Attendees:
Voting Members: 15 total (8 needed for quorum). Quorum was present.

P	Jeff King (Chair)	A	Cristian Ciobanu (ME)	P	Linda Figueroa (CEE/MN)	P	Joseph Horan (HASS)
P	Mark Eberhart (CH)	A	Brandon Dugan (GP)* Sabbatical Spring 2023	P	Mansur Ermila (PE)	P	Soutir Bandyopadhyay (AMS)
P	Bettina Voelker (CH)	A	Lawrence Wiencke (PH)	P	Pat Kohl (PH)	P	Ventzi Karaivanov (ME)
P	Sid Saleh (EB)	P	Deb Carney (AMS)				

Other Regular Attendees and Guests

P	Andrew Herring (AA)	P	Rick Holz (AA)	P	Paul Myskiw (RO)	P	Colin Terry (Student Life)
A	Sam Spiegel (Mines Online)	P	Emmelia Ashton (USG)	P	Liam Witteman (GSG)	P	Mara Green (AA)
P	Vibhuti Dave (UGS)	A	Tim Barbari (OGS)	A	Lori Kester (EM)	P	Nicole Becwar (LB)
P	Karla Perez-Velez (CASA)	P	Deb Jordan (Trefny)	A	Jen Gagne (Graduate Admissions)	P	Terri Hogue (Dean)
A	John Berger (Dean)	A	Todd Ruskell (PH)				

Special Guest(s): Iris Bahar (CS)

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Welcome   Jeff King

Approval of Minutes – March 14, 2023 and **Approval of the Agenda**   Jeff King

MOTION: To vote to approve the Faculty Senate minutes of March 14, 2023 by Horan, seconded by Voelker. Motion passed unanimously.

MOTION: To vote to approve the March 28, 2023 Faculty Senate agenda by Horan, seconded by Voelker. Motion passed unanimously.

Academic Affairs Announcements   Rick Holz
Holz welcomed faculty and Senators back from Spring Break.

Holz noted there had been concern regarding students registering for courses during lecture; Holz noted this had been discussed with the Registrar for any changes. However, due to constraints of the system there were limited options available. Holz asked faculty to remain patient with students registering for courses and recognized the inconvenience.

Holz reported E-Days begins April 13-15 and encouraged faculty to participate in E-Days festivities.

Holz reported the gas leak at the Labriola construction site on the morning of 2/28 had been cleared; access to vehicles in the parking garage was available. Holz reported there had been a gas line severed at the construction site. Holz apologized to those disrupted during the time.

Registrar's Office Announcements   Paul Myskiw

Myskiw reminded faculty that registration begins early for students needing accommodations. To help avoid many students registered at the same time, the density of registration groups was spread out to take pressure off. Students would then have time to resolve any issues during registration. Myskiw hoped this may clear congestion during registration week. Myskiw noted there had been internal discussion on spreading registration over a longer time to relieve pressure.

Faculty and student inquiries, desires, or enhancement needs on the new Trailhead can be sent to Myskiw. More modernization could be expected over the next several months.

Committee Reports and Presentations

<u>Faculty Contracts</u>   Todd Ruskell
Faculty Senate Ad Hoc Committee
No report.

<u>Student Signature Experience</u>   Linda Figueroa
Faculty Senate Ad Hoc Committee
Figueroa provided overview of the SSE projects. Twelve projects were funded with accounts set up April 14, 2021. Six projects were closed; Figueroa noted some projects were designated for one-year and concluded. Currently open projects were excited to continue SSE efforts. A final report was requested from open and closed projects on lessons learned. Figueroa noted some projects did not go forward or did not use as much of the funding as expected.

Figueroa shared open and closed SSE projects.

1. Mirror Mentoring at Mines: Closed.
2. Business in Design: Open.
3. The Graduate Signature Experience: Open.
4. Money Matters: Open.
5. Nuggets Badging: Closed.
6. Immersive Gaming: Closed.
7. M-Days: Closed.
8. Discovery@Mines: Closed.
9. UG Research: Open.
10. Sustainable Energy at Mines: Open.
11. Student Chapters: Open.
12. Environmental Lab: Open.

- **Question** on final reports on closed SSE projects; Figueroa notified Senators that the reports had been requested of all projects. Figueroa noted there had been continuity issues as leadership changed between the start of the committee and the present. Reports from May 2022 are still available, but some projects have gone further or did not provide a report. Reports should outline complications and objectives met.
- **Question** when the report information would be available; Figueroa expects reports by the end of the semester.
- **Question** on how the remaining funds could be used and if funds could be used to further promote SSE; Figueroa noted this would be the goal following reports on lessons learned.

Senator noted some projects had been conservative with their funds. A fiscal model for projects was recommended; Figueroa noted projects did not have much guidance.

Chat GPT and AI   Jeff King
University Committee
King reported generative AI becoming a large topic regarding academic publishing, academic misconduct, and potential other issues. The committee considers issues regarding generative AI. King reported GPT 4 iterates every six months; some forms of AI may generate research papers and write and read resumes. University committee to consider transformative issues, how it effects academia, and other viewpoints. King had been asked to sit on the committee and encouraged faculty to attend.

2024 Welcome Week Task Force   Jeff King
University Ad Hoc Committee
King reported there had been discussions on expanding Welcome Week activities and consideration of activities for all freshmen, including the Oredigger camp. King volunteered to sit on the committee and encouraged Senators and faculty to join. Committee work begins 2024.

Faculty Workload   Mark Eberhart
Faculty Senate Ad Hoc Committee
Eberhart reported several faculty agreed to sit on the committee; committee intends to meet to go over recommendations prior to the last Senate meeting of the semester.

Council Reports
Undergraduate Council   Joe Horan
Horan reported Council discussed the proposed core curriculum Catalog language presented by Dave. Council did not provide significant opposition to the proposal. As of 3/15, Council voted to approve the language with twelve (12) for, one (1) against, and four (abstentions). Councilors noted the process of the core revision appeared rush or had moved too quickly.

Graduate Council
Appendix C – Graduate Curriculum Items for Senate Presentation
The Engineering and Technology Management (ETM) program proposed changes to the program to align with the HLC Assumed Practices regarding 400-level courses in graduate programs.

Research Council   Sid Saleh
Saleh reported Council had voted to award the senior awardee A. Clarke and junior awardee M. Friedman. The results of Council and Senate votes were recorded, and the junior and senior awardees were reported to AA.

Saleh reported the Research Equipment/Instrumentation Investment (REI) funding had closed for Spring 2023. The grants are being processed by the Council's internal committee for five applicants, four of which qualified for the grant.

Confirmations and Appointments   Cristian Ciobanu
Conflict of Interest Committee
The committee reported an opening of chair. Shubham Vyas from CH was able to serve as chair of the committee for a full, two-year term.

Parking Advisory Committee
The committee reported an opening for a faculty representative. Cristian Ciobanu volunteered to serve as faculty representative.

MOTION: To vote to nominate S. Vyas as chair of the Conflict of Interest committee and C. Ciobanu as faculty representative on the Parking Advisory committee by Voelker, seconded by Horan. Motion passed unanimously.

Undergraduate Council   Joe Horan
Student Life CORE Changes
The Student Life proposals were presented to Senate on 3/28 including learning outcomes and additional details on topics covered in the course. Horan reported the four memorandums outlining Student Life changes included the introduction of CSM202 as a required course; the credit increases from half to one credit on CSM101, CSM201, and all PAGN2XX courses, the deactivation of PAGN101 and PAGN102, and the implementation of Success and Wellness (S&W) electives into the core were approved by Undergraduate Council with sixteen (16) for, two (2) against, and one (1) abstention.

MOTION: To vote to approve the core curriculum Student Life plans as presented on 3/28 by Horan, seconded by Kohl. Six (6) for, one (1) against, and (1) abstention. Motion passed.

Core Curriculum Draft Catalog Language
Horan noted Undergraduate Council discussed the drafted language provided by Dave and approved the language with twelve (12) for, one (1) against, and four (4) abstentions.

Senator expressed unease in approving core language and a revised core with courses that have not been piloted and noted the timeline appeared artificial; Senator had felt there had been limited time to discuss the changes. Horan noted adjustments were made to the core due to discussions within Undergraduate Council and Faculty Senate. The proposals presented by CS on CSCI128 and Student Life on CSM202 provided information such as learning outcomes and specific plans for the course. Bahar reported CSCI128 was in development for several months with input across campus.

   -   **Question** on the number of seats being offered for CSCI128; Bahar reported the course plan would have ten sections for Fall 2023. Bahar noted this would not be all incoming freshman, but a large portion.

Senator noted past changes to the core had not been done without piloting; piloting allowed for additional, substantial changes to courses and student input for further course development. Several senators agreed regarding avoiding bad experiences for students in the core.

Senator expressed concern for multiple changes to the core over multiple Catalogs.

Horan reported language for a Core Curriculum Assessment committee had been drafted. The committee would be tasked with evaluating the effectiveness of new courses and proposed changes.

MOTION: To vote to approve the draft Core Curriculum Catalog language by Horan, seconded by Kohl. Six (6) for, three (against). Motion passed.

Appendix A – CORE Curriculum Items for Senate Vote

Horan reported the items 1.1 through 1.14 were program changes to the four-year plans or course flowcharts for undergraduate degrees offered. The changes reflected the proposed revision of the core curriculum with addition of new courses CSI128, CSM202; credit reductions of HASS100, PHGN100, and PHGN200; and credit increases of CSM101, CSM201, and all PAGN2XX courses from half credit to one credit. These changes progressed through Undergraduate Council with limited discussion.

Item 1.15 in Appendix A reflects the credit reduction of HASS100 from four to three credits. Horan reported the leadership of the course had produced plans to ensure the same learning outcomes are met and leveraging the class' dynamic, new technologies, and new pedagogical techniques.

Horan noted AMS first proposed implementing CSCI128 as a prerequisite or co-requisite for many courses but rescinded the proposal until the core revision was actualized.

MOTION: To vote to approve the curriculum items 1.1 through 1.15 in Appendix A in an omnibus Senate vote by Horan, seconded by Eberhart.
MOTION TO TABLE the vote to approve the curriculum items 1.1 through 1.15 in Appendix A in an omnibus Senate vote by Figueroa, seconded by Eberhart. Two (2) yes, six (6) against. The motion failed.

Senator noted having not seen the updated four-year plans from departments; Senator noted the process of the revision felt rushed and did not provide time for discussion. Senate discussed the process of the revision, and accessing the program change information through the Curriculum Inventory Management (CIM) system. Senator reminded faculty that Councilors represent departments, Council representatives should be bringing back information from Council and distributing feedback during Council meetings. Myskiw clarified that information changed in the CIM system was to the Freshman, Sophomore, Junior, and Senior flowchart that are posted within the Catalog under undergraduate degree programs.

Senate discussed the scheduling change of HASS100 and the impacts of delaying the approval of the credit reduction for two weeks. Senator made the recommendation to separate HASS100 in the chance that items 1.1 through 1.14 receive votes against approval, Senator noted HASS100's credit reduction was part of the core and could be considered with the presented items in Appendix A.

MOTION: To proceed to an online vote for curriculum items 1.1 through 1.15 in Appendix A by Horan, seconded by Kohl. Six (6) for, four (4) against. Motion passed.
AMENDED MOTION: To add a twenty-four-hour time-limit on the online vote by Horan, seconded by Saleh. Motion passed unanimously.

- **Question** if twenty-four-hours would impact the timeline for Catalog publication; Myskiw confirmed this would not present an issue.

Senator noted there had been undercurrent from individuals within departments that were not supportive of the changes being brought forward, some commented on feeling "pushed".

NOTE: The Faculty Senate online ballot was distributed on 3/28, Senator raised concern about the validity of the ballot's structure. A renewed ballot was distributed 3/29. The results of the online ballot for approval of curriculum items 1.1 through 1.15 in Appendix A were seven (7) for, one (1) against. Items of Appendix A passed.

Appendix B – Non-CORE Curriculum Items for Senate Vote
Items 2.1 through 2.3 in Appendix B were presented to Senate on 3/14. Item 2.1 was a program change to the Aerospace Engineering minor updating its list of available courses and removing deactivated courses. Item 2.2 was a program change to the Minor/ASI in Electrical Engineering in which language was clarified on courses available for students to receive the minor. Item 2.3 was a program deactivation of the minor in biophysics. Horan reported the minor had not seen student involvement in several years.

MOTION: To vote to approve curriculum items 2.1 through 2.3 in Appendix B in an omnibus Senate vote by Horan, seconded by Voelker. Motion passed unanimously.

Graduate Council   Tina Voelker
Appendix D – Graduate Curriculum Items for Senate Vote
Voelker reported items 4.1 through 4.5 in Appendix D passed Graduate Council with limited discussion.

MOTION: To vote to approve curriculum items 4.1 through 4.5 in Appendix D in an omnibus Senate vote by Voelker, seconded by Eberhart. Motion passed unanimously.

Adjourn   Jeff King
Meeting adjourned: 3:49 pm.
Next meeting: April 11, 2:00-4:00 pm in the Guggenheim Boardroom and Zoom. Please send agenda items to Mara Green (mgreen1@mines.edu) 1 week prior.

Appendix A

1.1 **APPLIED MATHEMATICS & STATISTICS**
[CIM 2/27; UGC 3/15]
1 program change: BS-AMS: BS in Applied Mathematics and Statistics
THE FOLLOWING ARE NEW CORE CHANGES: We will drop 3 hours of free elective credit. Not much else will change for us in the new core. The new flow chart has been input. At the same time, we will remove MATH530 from the elective lists for the CAM and STAT BS degrees (that is a service course containing material already required in other major classes)

1.2 **CIVIL & ENVIRONMENTAL ENGINEERING**
[CIM 3/6]
3 program change: BS-CE: BS in Civil Engineering
BS-CONSTR: BS in Construction Engineering
BS-EVE: BS in Environmental Engineering
Core course flowchart changes.

1.3 **CHEMICAL & BIOLOGICAL ENGINEERING**
[CIM 2/13; UGC 3/1]
1 program change: BS-CHE: BS in Chemical Engineering
Updating program requirements in accordance with core revision.

1.4 **CHEMISTRY**
[CIM 2/24; UGC 3/15]
1 program change: BS-CHM: BS in Chemistry
Updated flowchart to include new core requirements: Chemistry track, Environmental Chemistry track, Biochemistry track, BS in Biochemistry.

1.5 **ECONOMICS & BUSINESS**
[CIM 3/1]
2 program changes: BS-BEMS: BS in Business Engineering and Management Science
BS-ECO: BS in Economics
Core revision; course flowchart updated.

1.6 **ENGINEERING, DESIGN, AND SOCIETY**
[CIM 2/24; UGC 3/15]
1 program change: BS-EGN: BS in Design Engineering
Updates to program due to core revisions.

1.7 **GEOLOGY & GEOLOGICAL ENGINEERING**
[CIM 3/1]
1 program change: BS-GLE: BS in Geological Engineering
Changes are related to meeting the changes in core curriculum being implemented in 2023-24, also reducing required credit hours to 133 from 137.5.

1.8 **GEOPHYSICS**
[CIM 2/15; UGC 3/1]

1 program change: BS-GPE: BS in Geophysical Engineering

The GP department conducted an update on core courses to fit the campus-wide adjustment. The department also proposes the addition of six tracks that would guide our undergraduate students in their course selection and career development. This is an approach that has been adopted by various other programs, such as Mechanical Engineering.

1.9   **MECHANICAL ENGINEERING**
[CIM 3/1]
1 program change: BS-MECH: BS in Mechanical Engineering
1. Changes according to Mines CORE adjustment.
2. Electives list updated (added/removed).
3. GPA calculation course list trimmed down.
4. Tracks courses updated. 5. Minors and ASI text and credit hours corrections.

1.10   **METALLURGICAL & MATERIALS ENGINEERING**
[CIM 2/16; UGC 3/8]
1 program change: BS-CERE: BS in Ceramic Engineering
                           BS-MME: BS in Metallurgical and Materials Engineering
Program grid changes to reflect updates in response to core changes.

1.11   **MINING ENGINEERING**
[CIM 3/1]
1 program change: BS-MNE: BS in Mining Engineering
Updates to the course flowchart reflecting core revisions.

1.12   **PETROLEUM ENGINEERING**
[CIM 2/22; UGC 3/8]
2 program changes: BS-PTE: BS in Petroleum Engineering
These changes are to meet the new core curriculum requirements.
                           MIN-PTDA: Minor in Petroleum Data Analytics
We are updating the requirements to reflect changes in the core curriculum and the discontinuation of some courses previously listed as part of this minor.

1.13   **PHYSICS**
[CIM 2/24; UGC 3/15]
1 program change: BS-PHE: BS in Engineering Physics
These changes will better match our undergraduate Engineering Physics degree with the larger campus changes in our core curriculum. Changes to flowchart.

1.14   **QUANTITATIVE BIOSCIENCES AND ENGINEERING**
[CIM 2/23; UGC 3/8]
1 program change: BS-QBE: BS in Quantitative Biosciences and Engineering
Updates to course flowchart.

1.15   **HUMANITIES, ARTS, AND SOCIAL SCIENCES**
[CIM 3/1; UGC 3/15]
1 course change: HASS100: NATURE AND HUMAN VALUES

Credit change from 4 to 3 hours.

Appendix B

Non-CORE Curriculum Items for Senate Vote from 3/14/23

2.1 **MECHANICAL ENGINEERING**
[CIM 2/27; UGC 3/15]
1 program change: MIN-AERO: Aerospace Engineering Minor
Courses added to list.

2.2 **ELECTRICAL ENGINEERING**
[CIM 2/19; UGC 3/8]
1 program change: MINASI-EE: Minor/ASI in Electrical Engineering
We are being specific about which courses students have to take to get a minor within the Catalog language.

2.3 **PHYSICS**
[CIM 3/3; UGC 3/15]
1 program deactivation: MIN-BPHYS: Minor in Biophysics
No longer offering the program.

Appendix C

Graduate Curriculum Items for Senate Presentation

3.1   **ECONOMICS AND BUSINESS**
[CIM 3/1; GC 3/15 (Consent Agenda)]
1 program change: MS-ETM-NT: Engineering and Technology Management (ETM)
                      Master of Science
Catalog language changes to align with HLC.

Appendix D

4.1 **CHEMISTRY**
[CIM 2/8; GC 3/1]
1 program change: MPMSPHD-CH: MP, MS & PhD – Chemistry
Number of course credits for MS degree was decreased from 24 to 18 credits, so that it now matches the number of credits required for the PhD degree.

4.2 **COMPUTER SCIENCE**
[CIM 2/6; GC 3/1]
1 program change: MSPHD-CS: MS & PhD – Computer Science
Change prerequisite requirements based on core changes in undergraduate Catalog.

4.3 **ENGINEERING, DESIGN, AND SOCIETY**
[CIM 2/14]
1 program change: MSCR-HES: Humanitarian Engineering and Science
Changes to the program are:
Replacing two core courses: Adding EDNS 515, Intro to Science & Technology Studies (a currently existing, but renamed course) to replace EDNS 590 Risks in HES. Adding EDNS 579 Community Based Research Methods (a new graduate level version of this course) to replace the 400 level of this course. Adding HASS 590, Energy & Society and EDNS 590 Risks in HES to the Elective List.

4.4 **GEOLOGY & GEOLOGICAL ENGINEERING**
[CIM 2/7; GC 3/15]
1 program change: CRMS-GISG: GIS & GeoInformatics – Certificates and MSNT
GIS Programs. Because this is newly formed into the GIS Master's Degree as an ONLINE degree, there are a few changes for this program.

4.5 **GEOPHYSICS**
[CIM 1/31; GC 3/1]
1 program change: XCR-PEGP: Graduate Certificate in Energy Geophysics
We are requesting both a name and programmatic change for the existing Graduate Certificate in Geophysics. The name change is also consistent with market research (including by Mines personnel) that finds "energy" to be a more compelling term than "petroleum" with the demographic most likely to enter the Graduate Certificate program. Thus, it is likely to have broader appeal and likely increase enrollment. The programmatic change would allow us to broaden the types of courses offered in this program beyond petroleum (i.e., distributed fiber optic sensing; carbon capture, utilization, and storage), and provide a path for future extensions in the direction of geothermal, geophysical engineering (e.g., solar and wind resources), and locating the minerals required for the energy transition. It would also provide prospective students with greater flexibility in designing a graduate certificate program that is better aligned with their career goals and objectives. Finally, we note that all the listed courses already exist as online 8-week asynchronous courses; thus, there is minimal overhead for contributing faculty associated with this proposed name and programmatic change.