

Colorado School of Mines – FACULTY SENATE MEETING MINUTES
February 14, 2:00 – 4:00 pm, Guggenheim Boardroom and Zoom

Attendees:

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

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

Other Regular Attendees and Guests

P	Andrew Herring (AA)	P	Rick Holz (AA)	P	Paul Myskiw (RO)	P	Colin Terry (Student Life)
P	Sam Spiegel (Mines Online)	P	Emmelia Ashton (USG)	A	Liam Witteman (GSG)	P	Mara Green (AA)
P	Vibhuti Dave (UGS)	P	Tim Barbari (OGS)	P	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)

Special Guest(s): Todd Ruskell (PH), Rob Thompson (CS), Priscilla Nelson (MN), Hisham Sager (EE)

Welcome

Jeff King

Approval of Minutes (January 24, 2023) and Adoption of Today's Agenda

Jeff King

MOTION: To approve the January 24, 2023 Faculty Senate minutes by Figueroa, seconded by Horan. Motion passed unanimously.

MOTION: To adopt the February 14, 2023 Faculty Senate agenda by Voelker, seconded by Ermila. Motion passed unanimously.

Appointment of New Senator

Cristian Ciobanu

Executive committee reached consensus on filling the remainder of Ebru Bozdag's 2021-2024 term. Mark Eberhart volunteered and upon reviewing the Bylaws, the committee concluded Eberhart eligible to serve in that capacity.

MOTION: To nominate M. Eberhart to serve the remainder of Ebru Bozdag's 2021-2024 Faculty Senate term by Ciobanu, seconded by Figueroa. Motion passed unanimously.

Academic Affairs Announcements

Rick Holz

Holz thanked faculty and staff for flexibility during the 2/13 events. Holz thanked the AMS department head Gus Greivel for last minute rescheduling of the common exams scheduled 2/13. Holz encouraged faculty to reach out to colleagues and resources.

Career Days transpired 2/7 and 2/8. More than 330 different companies visited Mines making Spring 2023 the largest Career Day ever. Holz thanked faculty for being flexible and allowing students to attend.

Holz reported there were glitches in pulling data for FDRs. The data was late returning to faculty and the deadline was extended by a week; Holz asked extensions to be reported to department heads and Deans.

HLC self-study had been submitted Friday 2/10. King represented faculty on the HLC team headed by Herring. The HLC onsite visit is scheduled for 3/13 and a half-day on 3/14. The federal compliance document is being reviewed externally, the individual contacted Peter Han for course schedules for the fall and spring. Reviewer will also reach out for individual class syllabi. The website is live with a PDF of the assurance document, federal compliance document, and quality initiative document with all tram member names ([click here to access the site](#)). An in person and virtual townhall is expected on HLC and how it is completed. Herring to provide an overview of the accreditation document for faculty.

ABET accreditation begins 2024.

Registrar's Office Announcements

Paul Myskiw

Sarah Lamont sent the final exam scheduling grid and asked departments to take a closer look to assure all is in order. Myskiw reported planning to publish the finalized grid by the end of the week.

With the upcoming core changes a new category of Success and Wellness had been established. Myskiw suggested creation of a new schedule type related to Success and Wellness called "Activity". PAGN courses are currently set up as labs which hold a 3:1 contact hour ratio, the new schedule would be 1:1 with one credit per hour of meeting.

Myskiw reminded faculty an email to advisors had been sent to clean up advisor lists. The documentation was not maintained at Mines; students that graduate or left Mines were not removed. Faculty advisors asked to review the advisee list to provide a helpful tool for faculty.

Faculty Trustee

Dinesh Mehta

Board of Trustees met 2/3. Mehta reported Volpi presented a financial report and capital projects update. The Labriola Innovation Hub and Beck Venture Center are due to open August 2023. The new parking garage comes with classrooms and is expected to open August 2024. Several projects are in their planning phase with a residential hall and much needed dining facilities. An update had been provided on placement numbers with ninety percent across the board; Dinesh noted there was a large difference between male and female settings and more information had been requested. A report had been provided to the Board on the HLC process and core curriculum highlights. Teaching faculty topics were reviewed at the meeting, too.

Committee Reports

Teaching Workload Ad Hoc Committee

Brandon Dugan

Non-Senate Ad Hoc Committee

Dugan provided report on drafted guidelines on teaching assignments. The guidelines would assist DHs sitting down and discussing assignments with faculty. The draft would then be provided to faculty for feedback. There are no proposed changes to the Handbook, the committee provided clarity on when teaching loads can be reduced, by whom and when teaching loads can be increased and by whom.

Four guidelines were provided for department heads:

1. Ensure we provide students with high-quality instruction;

2. Facilitate the productivity of faculty members with highly active research programs and/or exceptional service responsibilities by reducing their teaching loads;
3. Rebalance the workload of tenure-line faculty members whose research productivity falls below normal expectations by increasing teaching loads;
4. Personalize the workload of each faculty member in accordance with items 1-3.

Teaching release time could be granted to individual faculty members that are new/transitional or engage in: research productivity, very high-commitment courses or course coordination, extensive academic advising, and/or academic administration appointments.

- **Question** on if the committee discussed the differences between student credit hours and flat number credit hours; in a previous version of the drafted document numbers had been included but the committee recognized removal of specific numbers would provide leniency when having discussions of teaching assignments. Dugan reported on committee difficulty when deciding what could be used across campus.

Senator noted the use of rating and ranking on individual student credit hours could be seen as flawed as faculty do not have direct control over students within classes.

Senator noted the varying levels of commitment between teaching a class of 250 and a three-hour graduate course.

Suggestion made to form a Senate ad hoc committee to provide feedback on the proposed guidelines from the Teaching Workload ad hoc committee.

Bylaws and Rules

Jeff King

Faculty Senate Ad Hoc Committee

Committee met and is looking at ideas. The current request of the committee is to look at other universities Bylaws. Next meeting held remotely 2/16 at 1pm.

Core Curriculum

Joe Horan

Faculty Senate Ad Hoc Committee

Horan reported the committee had completed its task as charged. Implementation had been carried out by Dean Dave and DHs. Dave reported an email had been provided to DHs, ADHs, undergraduate program directors, and UGC representatives detailing a checklist of what components of the core need to be integrated into each degree. The four-year plan for each degree was due 2/15 in preparation of submission in CIM by 3/1 for Undergraduate Council and Faculty Senate review and publication into the 2023-2024 Catalog.

Taskforce working on Catalog description of the core; drafted language had been completed.

Faculty Contracts

Todd Ruskell

Faculty Senate Ad Hoc Committee

Conversation had begun with AA. Ruskell thanked the Provost for communication. Ruskell worked with legal; first round of language was proposed by legal, and a counterproposal was drafted.

Budget

Cristian Ciobanu

University Committee

Ciobanu reported the FY2024 budget schedule had been drafted. Committee gathering operational expenses to project. Media forecast displayed \$267 million from state and tuition with increase of additions; a three percent increase is expected for budget FY2024 from continued education, state support, and some auxiliaries.

Enrollment scenarios were shared, totaling 7,459 undergraduate and graduate students. Tuition trends, resident and non-resident financial aid, and loan debt used to inform financial aid implications and decisions, but Ciobanu reported it may not be of much use to faculty.

Committee moving toward final decision June 2023.

Council Reports

Undergraduate Council

Council called supplementary meetings every week to move through curriculum items.

Graduate Council

No report from Graduate Council.

Research Council

Saleh encouraged researchers to submit for the Excellence in Research Award nominations.

Briefings, Informational Items, and Updates

Student Life – Core Curriculum

Colin Terry

Terry provided an update on Student Life pieces of the core curriculum. PAGN courses expected to move from a half credit to one credit. Current courses CSM101 and CSM201 are moving from a half credit to one credit, as well. Courses will double down on success components. CSM202 would be proposed as a new, one credit required course in the sophomore year focused on wellness and wellbeing. Terry noted CSM202 would follow-up on CSM101 and critical wellness considerations.

The Success and Wellness category of the core would be fulfilled by CSM101, CSM202; and a choice of CSM250, CSM275, CSM350, or a PAGN2XX course.

- **Question** if memos provide details on the new CSM202 course and how it will assess success; Terry would work on submitting the new CSM202 course in CIM alongside working with the Trefny Center and Registrar's Office on course design and ongoing annual assessment of the course to assure alignment with best practices.

Additional PAGN courses would be offered at the 200-level and PAGN101 and PAGN102 would no longer be offered. A complete presentation expected from Student Life on pieces of the core curriculum at a future Senate meeting.

Open Announcements

Figuroa reported Calendar Committee had not met for Spring 2023. Committee proposed working on language around non-assessment days, Figuroa asked Senators if this language should be brought to Senate.

Figueroa reported Student Signature Experience ad hoc committee found SSE projects are active and continue until 4/30. Committee would work on a closeout proposal and consideration of an additional call for SSE projects.

Horan, Senate representative on the Handbook Committee, could no longer attend due to Undergraduate Council and core curriculum commitments and asked for Senate volunteer to sit on the committee.

Confirmations and Appointments

Cristian Ciobanu

No confirmations and appointments for 2/14.

Senate Business

Jeff King

Faculty Workload Ad Hoc Committee

- **Question** on a timeframe for when feedback should be provided on the teaching assignment guidelines presented; a specific timeframe was not established, King suggested a chair be found to begin work on the committee.

Holz clarified that presented guidelines would not go into the Handbook but the Policies and Procedures Manual.

MOTION: To form the Faculty Workload Ad Hoc committee by Horan, seconded by Karaivanov. Motion passed unanimously.

Undergraduate Council

Joe Horan

Core Curriculum Item(s) for Senate Vote – Appendix A

1.1 New Core Course – CSCI128: Computer Science for Stem

Senator asked clarification on updated core Catalog language; Dave reported the language had been drafted and is being finalized. Finalized language would be submitted and provided to Undergraduate Council and Faculty Senate.

Approval of CSCI128 approves the course. Senate clarified that approval of the final core Catalog language would then integrate CSCI128 into the core.

- **Question** on piloting the course rather than integrating fully; Thompson reported the course is being developed currently and planning to begin teaching in Fall 2023. Approximately one or two other faculty members in the department would be instructing the course and the remaining slots would be filled by adjuncts.
- **Question** on evaluation of adjuncts teaching core courses; Thompson unaware of formal evaluation on effectiveness but student feedback is reported each term and varies per instructor. Thompson did not report a large discrepancy between permanent and adjunct faculty in student ratings.

Dave clarified the current rollout of the core and outlined course credit changes to HASS100, PHGN100, and PHGN200 alongside program changes implementing the new wellness courses and CSM202 course. CASES would not be implemented into the current core changes and should be left out of program

changes. CASES/STFutures and the twelve pathways within the H&SS categories would begin post 2023-2024.

Myskiw reported the scheduling plan to transfer courses coming in as an equivalent to CSCI128 so to be fully equipped to offer the course to an incoming class size of 1,450 students.

MOTION: To nominate M. Eberhart to serve the remainder of the 2021-2024 Faculty Senate term by Horan, seconded by Ermila. Seven for, one against, no abstentions.

Curriculum Item(s) for Senate Presentation – Appendix B and C

Senate requested a physics representative to provide additional information on curriculum lost by reducing the credits of PHGN100 and PHGN200 from four and a half credits to four credits.

Graduate Council

Tina Voelker

Curriculum Item(s) for Senate Vote – Appendix D

4.1 Program Change – MSPHD-AES: MS and PhD in Advanced Energy Systems

4.2 Program Change – MP-MEM: MP – Mining Industry Management (MP-MIM)

MOTION: To approve the program changes in items 4.1 and 4.2 in an omnibus Senate vote by Voelker, seconded by Ermila. Motion passed unanimously.

Curriculum Item(s) for Senate Presentation – Appendix E

5.1 New Program - MSNT-PH: Master of Science (non-thesis) Applied Physics Addition

5.1.1 Program Change - MSPHD-PH: MS (with thesis) & PhD – Physics

A graduate laboratory (PHGN515) was added to the master's in applied physics. The course is more experiential and replaces a theory course, classical mechanics. PHGN515 had also been added to the PhD in physics, as well.

Department found that a non-thesis masters provides a good track into the optics and semiconductor industries. Courses with hands on content are still part of the curriculum. There will be no new required courses introduced, the curriculum devised of currently taught and existing PHGN courses.

Open Floor

Jeff King

MOTION: To consider the undergraduate curriculum items in Appendices B and C, and the graduate curriculum items in Appendix A as presented by Horan, seconded by Voelker. Motion passed unanimously.

Adjourn

Jeff King

Meeting adjourned: 4:01 pm.

Next meeting: February 28 from 2:00-4:00 pm via Zoom webinar. Please send agenda items to Mara Green (mgreen1@mines.edu) 1 week prior.

Appendix A
CORE Curriculum Item(s) For Senate Vote

1.1

COMPUTER SCIENCE

[CIM 1/4; Provost 1/5; UGC 1/25]

1 new core course: CSCI128: COMPUTER SCIENCE FOR STEM

This course is considered part of the new Mines Core, and thus designated an essential class for all students studying at Mines. Increasingly each year, our society relies on computing technology to accomplish daily tasks. This is even more true for scientists and engineers in STEM fields. However, simply knowing how to use computers is not enough. Capable professionals must also know how to program computers to make the best use of them. This course will teach the basics of computer programming, targeting students with no prior experience. It will teach fundamentals that are necessary to program in any language, as well as data analysis techniques that will be applicable to all STEM students, regardless of their intended major. This is a residential course, meeting in-person 3 times each week.

Appendix C
NON-CORE Undergraduate Curriculum Item(s) for Presentation

- 3.1 **APPLIED MATHEMATICS & STATISTICS**
[CIM 12/14; UGC 2/1]
1 program change: BS-AMS: BS in Applied Mathematics and Statistics
This is a small change for the Computational and Applied Math major. We are adding MATH324 to the list of required courses and removing MATH335 from that list. The feeling is that if a CAM major takes just one of these, MATH324 is more practical. We will include MATH335 on the elective list.
- 3.1 **COMPUTER SCIENCE**
[CIM 1/4; UGC 2/1]
4 program changes: MIN-COMPE: Minor in Computer Engineering
Adding new CSCI 210 Systems Programming course to list of courses
 MIN-DSCI: Minor in Data Science
Updating responsible faculty. Add CSCI 478 Bioinformatics to list of courses
 MIN-RIS: Minor in Robotics and Intelligent Systems
Replace Intro to Stats with Intro to Prob
 MINASI-CS: Minor in Computer Science
Deactivating ASI. Currently zero students enrolled and ASIs are rarely utilized across campus. Further, due to prereqs a student completing the existing ASI would need 1 more course to complete the minor. Second version of minor being rolled into Minor in Computer Engineering.
- 3.2 **ECONOMICS AND BUSINESS**
[CIM TBD; UGC 2/1]
1 program change: BS-BEMS: Business Engineering and Management Science
The data science and business analytics core for the BEMS degree was originally constructed with classes that already existed in the Department of Economics and Business or elsewhere on campus. Now that the department has additional faculty depth in business analytics, the department wants to make sure that it is providing our students with the sequence of courses that will best serve their needs. Course proposals for the classes below have been submitted to CIM, and once those are approved, the program changes will be submitted to CIM.
- 3.3 **ENGINEERING, DESIGN, AND SOCIETY**
[CIM 12/21; UGC 2/1]
1 program change: MIN-LSR: Minor in Leadership in Social Responsibility
Update to course elective list for LSR minor. The Engineering for Community Development HE minor in EDS also lists elective courses which should be consistent between the two offerings.
- 3.4 **QUANTITATIVE BIOSCIENCES AND ENGINEERING**
[CIM 12/15; UGC 2/1]
1 program change: BS-QBE: BS in Quantitative Biosciences and Engineering

Update to technical electives list. Requested by L. Salinas 12/14/22
Updated field session placeholder in Summer Junior year - MG 12/15/22

Appendix D
Graduate Curriculum for Senate Vote

4.1

ENERGY

[CIM 11/9; GC 1/18]

1 program change: MSPHD-AES: MS and PhD in Advanced Energy Systems
AES is cleaning up the catalog language, clarifying course/credit requirements and clarifying PhD requirements.

4.2

MINING

[CIM 11/14; GC 1/18]

1 program change: MP-MEM: MP – Mining Industry Management (MP-MIM)
This program has been proposed and approved as an online program, and it is heavily focused on management aspects of the mining industry. It has quickly gained reputation in the first round of offering, making it to the top 25 technical professional masters programs in the US. We have had several applicants that do not have an Engineering background who want to enter the program, and since the contents are not very technical, they could be successful. But with the name Engineering in the title, students without an Engineering degree would be granted one in this program, and the MN faculty did not see that to be appropriate. So, with the change in name, we also propose changing the entry requirements and making the program available to all Mining and other Engineers, as well as to those who have worked in other disciplines in the mining and minerals industry for at least five years. Also, the original program was a block model with all 33 credit hours prescribed, and we are changing it to allow up to two elective courses (6 credits) to be taken. This will offer flexibility to the student to take some other online courses to become more specialized in certain areas or to opt out of topics in which they already have competency. This also allows students to tap into other online content that Mines has to offer and is attractive to them.

Appendix E
Graduate Curriculum Item(s) for Senate Presentation

5.1

PHYSICS

[CIM 12/13; Provost 12/13; GC 1/18]

1 new program: MSNT-PH: Master of Science (non-thesis) Applied Physics
Addition

The addition of a non-thesis MS program to our Physics program aligns with the goals of Mines at 150, in particular

- *Be a top-of-mind and first-choice university for students, public and private partners, and faculty and staff.*
- *Expand offerings and diversify delivery, in particular for professionally oriented pre and post graduate education.*
- *Grow the scale and impact of research, focus on thematic strengths, develop a more social research culture, diversity funding sources.*

The non-thesis program can offer our combined students a more accessible method to get a MS degree in Applied Physics

5.1.1

[CIM 12/13; GC 2/1]

1 program change: MSPHD-PH: MS (with thesis) & PhD – Physics

Our new Graduate laboratory course is designed to provide first year graduate students with introductory skills necessary to carry out research in discipline specific laboratories – both in the physics department and post-graduate career industrial settings. Graduate laboratory is one step toward the goal of modernizing the Physics graduate curriculum, both content and pedagogy, and to target requirements of employers. In this effort, Classical Mechanics has been partially ‘absorbed’ into the other four core courses: Quantum Mechanics, Electricity and Magnetism, Statistical Mechanics, and Mathematical Methods. These four courses are, in turn, being integrated to avoid artificial siloing of information. In addition to providing students a rich, interactive learning experience, the new graduate laboratory course is intended to grow the scale and impact of research at Mines. Engaging first year graduate students in real-world research will better prepare them to join broader research communities and contribute at an earlier stage in their careers. Success of the revised physics graduate curriculum will further Mines’ goal to be a top-of-mind and first-choice university for students, public and private partners, and faculty and staff.

5.2

APPLIED MATHEMATICS & STATISTICS

[CIM 12/12; GC 2/1]

1 program change: MSPHD-AMS: MS & PhD – Applied Math/Statistics

AMS recommends to revise the CAM graduate core coursework by removing MATH 515 from the required core coursework, instead offering 515 as one of the electives students may choose to take, and adding MATH 501 to the required core coursework. This will ensure that all CAM graduate students have a well-rounded theoretical skillset to complement their skills in mathematical modeling, calculations, and numerical methods.