

Colorado School of Mines – FACULTY SENATE MEETING AGENDA
 March 14, 2:00 – 4:00 pm, Guggenheim Boardroom via Zoom

<u>Time</u>	<u>Item</u>	<u>Presenter</u>
	<i>Information Session</i>	
2:00-2:05 pm	Welcome	Jeff King
2:05-2:10 pm	Approval of Minutes – February 28, 2023 Approval of the Agenda	Jeff King
2:10-2:15 pm	Academic Affairs Announcements	Rick Holz
2:15-2:20 pm	Registrar’s Office Announcements	Paul Myskiw
2:20-3:00 pm	Committee Reports and Presentations <i>Core Curriculum</i> <ul style="list-style-type: none"> • H&SS Leadership <ul style="list-style-type: none"> ○ Resolutions 2.f and 2.g (new core course plans) <i>Faculty Contracts</i> <i>Bylaws and Rules</i> <i>Student Signature Experience</i>	
3:00-3:30 pm	Council Reports and Presentations <i>Undergraduate Council</i> <ul style="list-style-type: none"> • Student Life <ul style="list-style-type: none"> ○ Overview of PAGN2XX Changes Approved ○ Overview of CSM101/201 Changes Approved ○ Overview of CSM202, including: <ul style="list-style-type: none"> ▪ Overview of Success and Wellness for Core Curriculum Revision • Appendix A – CORE Curriculum Items for Senate Presentation • Appendix B – Non-CORE Curriculum Items for Senate Presentation <i>Graduate Council</i> <ul style="list-style-type: none"> • Appendix D – Curriculum Items for Senate Presentation 	
	<i>Business Session</i>	
3:30-3:35 pm	Confirmations and Appointments <i>Faculty Workload</i>	Cristian Ciobanu
3:35-3:30 pm	Senate Business <i>Distinguished Lecture Nomination 2024</i> <i>Excellence in Research Awards</i>	Jeff King
3:30-3:35 pm	Committee Business	Jeff King

3:35-3:40 pm **Research Council**

Sid Saleh

3:35-3:45 pm **Undergraduate Council**

Joe Horan

Appendix C – Non-CORE Curriculum Items for Senate Vote

3:45-3:55 pm **Graduate Council** Tina Voelker

Appendix D – Curriculum Items for Senate Vote

3:55-4:00 pm **Open Floor**

Jeff King

4:00 pm **Adjourn**

Jeff King

Next meeting: March 28, 2:00-4:00 pm in the Guggenheim Boardroom and Zoom. Please send all agenda items to Mara Green (mgreen1@mines.edu) 1 week prior.

Appendix A
CORE Curriculum Items for Senate Presentation

- 1.1 **APPLIED MATHEMATICS & STATISTICS**
[CIM 2/27]
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]
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]
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]

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]

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]

1 course change: HASS100: NATURE AND HUMAN VALUES
Credit change from 4 to 3 hours.

Appendix B
Non-CORE Curriculum Items for Senate Presentation

- 2.1 **MECHANICAL ENGINEERING**
 [CIM 2/27]
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]
1 program deactivation: MIN-BPHYS: Minor in Biophysics
No longer offering the program.

Appendix C

Non-CORE Curriculum Items for Senate Vote from 2/28/23

3.1

COMPUTER SCIENCE

[CIM 1/4]

1 program change: 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.

Appendix D
Graduate Curriculum Items for Senate Presentation

- 4.1 **CHEMISTRY**
[CIM 2/8; GC 3/1]
1 program change: MPMSPHD-CH: MP, MS & PhD – Chemistry
Number of 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]
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

Appendix E
Graduate Curriculum Items for Senate Vote from 2/28/23

5.1

MINING ENGINEERING

[CIM 1/17; GC 2/15]

1 program change: MSPHD-ERSE: Earth Resources Science and Engineering
Dept of Mining engineering offers MS and PhD degrees under Earth Resource Development Engineering (ERDE). This program allows faculty in our dept to recruit and advise students from various engineering backgrounds to work on mining and minerals related topics. There has been much demand and inquiry to allow students with science background to join the program and work on these topics. ERDE by nature is multi-disciplinary and we are opening it to the possibility of having students with Science background to join the program. With this change, we are also proposing to change the name of the program to "Earth Resources Science and Engineering (ERSE)".

In brief this program change involves:

- Change the requirements for ERDE admission so that students from non-engineering backgrounds can also be admitted without having to fulfill the requirements for an engineering undergraduate degree*
- Change the name of ERDE – Earth Resource Development Engineering to ERSE Earth Resources Science and Engineering*

5.2

CHEMISTRY

[CIM 2/10; GC 2/15]

1 program change: CRTG-GE: MSPHDCERT – Analytical Geochemistry
This submission reflects only program elective updates and the removal of an outdated sentence. Specifically:

Master of Science and Doctor of Philosophy

Geochemistry Degree Track

MS Course List

Reordered list for ease of reference

Removed GEOL 535 Litho Ore Forming Processes, as the course is no longer being offered.

PhD Course List

Reordered list for ease of reference

Removed GEOL 535 Litho Ore Forming Processes, as the course is no longer being offered.

Environmental Biogeochemistry Degree Track

Reordered course list for ease of reference

Under 4. One Earth Science-Focused class,

Added GEGX 571 Geochemical Exploration

Graduate Certificate of Analytical Geochemistry

In the Electives list:

Reordered the list of ease of reference

Added CEEN 562 Environmental Geomicrobiology

Professional Masters in Environmental Geochemistry

Removed a sentence about requiring 1 lab course—this is a vestigial sentence mistakenly missed during a prior year's edit.

In the Electives list:

Added CEEN 562 Environmental Geomicrobiology

Removed GEOL 535 Litho Ore Forming Processes, as the course is no longer being offered.

Added GEGX 571 Geochemical Exploration

5.3

GEOPHYSICS

[CIM 1/10; GC 2/15]

1 program change: MPMSPHD-GP: MP, MS & PhD – Geophysics & Geophysical Engineering

The structure of the GP graduate degrees is currently over-prescriptive in the courses required to satisfy the three presently listed coursework focus areas of theory, applied and computation. This structure also appears to downplay the importance of the "Earth and Space" focus area by not required such coursework in the GP graduate degree programs. We are seeking a programmatic change that affords GP graduate students (and their committees) a greater flexibility in choosing the courses to fulfill their GP graduate degree program and is better tailored to our student's specific research and career goals. We are also looking to rebalance the degree emphasis by requiring coursework in the "Earth and Space" focus area in addition to the three others identified above. These modifications are consistent with the recent broadening the scope of the departmental research and teaching activities over the past few years. In addition, through this programmatic change the GP Department will be expanding the offerings and diversifying the delivery of GP graduate program available to students, which is consistent with the stated Mines@150 goals.

5.4

QUANTITATIVE BIOSCIENCES AND ENGINEERING

[CIM 2/13; GC 2/15 Consent Agenda]

1 program change: MSPHD-BIO: MS & PHD – Quantitative Biosciences and Engineering

This update is to add existing courses to the QBE Elective course list.

5.5

ELECTRICAL ENGINEERING

[CIM 1/25; GC 2/1 Consent Agenda]

1 program change: MSPHD-EE: MS & PhD – Electrical Engineering

Renaming Technical electives.

5.6

MATERIALS SCIENCE

[CIM 2/13; GC 2/15 Consent Agenda]

1 program change: MSPHD-MATSCI: MS & PhD – Materials Science

This update is to clarify that electives need not be limited to MLGN prefix courses. This is not a change in practice.

5.7

MECHANICAL ENGINEERING

[CIM 12/13; GC 2/15]

1 program change: MSPHD-MECH: MS & PhD – Mechanical Engineering

Updating list of approved Research Core Courses to ensure that enough courses are taught so that students can graduate on time.