Welcome
Tina Voelker
Green reminded Councilors that new programs for Fall 2023 would need to be submitted into CIM as soon as possible, if a new program is expected reach out to Barbari and Voelker.

Green reminded Councilors that upcoming deadlines for the 2023-2024 Catalog begin 1/11 through 1/25 for program and course changes, and new course proposals.

Briefings and Information Items
Office of Graduate Studies
Tim Barbari
No updates from the Office of Graduate Studies.

Registrar’s Office
Lori Kester
Kester asked Council on role of co-advisors and secondary advisors; asked how co-advising is determined and who receives credit as a co-advisor.

Councilor noted some co-advisors are co-PIs on a grant. Percentage distribution is fifty-fifty on the grant and advising is split fifty-fifty.

Manually entering co-advisors has not been seamless with no way to push percentages in the Banner system. Councilor noted that co-advising can be written into the FDR; thesis committee page within Banner does not pull into FDRs. Additional note made that some students may go several semesters before finalizing a committee, but have an advisor during that time. Credit needed during that time even if the Banner form is not pulling data into the FDR process.

Kester requested information on how critical tracking secondary advisors is; Barbari noted it is rare to see students pursuing two thesis degrees.

IGP non-thesis advisors allow for tracking the department the student falls into.
Graduate Student Government

Liam Witteman

GSG voted on and approved increasing four fees: health services, academic construction fee, athletics fee, and associated student fee.

Items for Council Vote presented 10/19/22

Proposal for Increasing Minimum Graduate Stipend

Tim Barbari

Barbari met with Financial Aid; noted number of PhD students seeking federal graduate loans has doubled in the last two years, of the 450 domestic PhD students: two years ago, thirty-seven sought loans. This year seventy-seven sought loans. Increase considered anomalous.

After tax stipends are of importance. Current cost of attendance calculated as $29,200; a $33,000 stipend, subtracting ten percent tax, needed to meet cost of attendance. Several R1 universities in low thirties for stipends with a separation between ivy league and private institutions that are considered competition. Mines’ stipends fall behind the Denver cost of living.

Barbari noted tuition and grants need to be discussed alongside stipends. A balance should be sought between increasing stipends and reducing tuition recovery on grants. Anecdote provided: review of DOE proposal where reviewer provided low review due to low stipends.

CH provided brief email exchange, stipend already $29,500. Fellowships had been offered at one point for competitive applicants. Noted a 10% increase would be aggressive. CBE questioned who would pay for the increase, but was overall onboard.

Discussion on tuition strategies, a formal proposal has not been presented.

Councilor noted some undergraduate students no longer considering graduate school at Mines, reported cost ineffective when industry provides experience and higher pay. Barbari reported higher percentage of undergraduate students with debts incurred. Councilor noted stipend is covering students working part-time with tuition coverage and medical insurance.

MOTION: Graduate Council membership endorses these minimum TA/RA stipend increases and urges administration to implement departmental budgets enabling these increases in TA stipends and develop strategies to aid with shortfalls in existing grants by Rostami, seconded by Walton. 19 for, 1 abstention.

1.2 Nuclear Engineering

Andrew Osborne

[CIM 10/4; Provost 10/4]

1 new course: NUGN570: MATHEMATICAL METHODS IN NUCLEAR SCIENCE AND ENGINEERING

One credit class. Students of different backgrounds entering the program with a diverse set of shortcomings. Class addresses these shortcomings. Instructor would address all topics, even if a set of students have that background. Advisor discretion on whether the student requires the course or not.

MOTION: To approve the proposed increase for the minimum graduate stipend by Osborne, seconded by Walton. Motion passed unanimously.

New Business
2.1 ENERGY
[CIIM 11/9]

Robert Braun

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.

Program description three years old and created in advance of the launch of the program; description required drastic updating to match departmental language provided on AES webpage. Mirrored ME language and adopted specific principles for AES. Course name changes made to acknowledge the textbooks used in the course, content remains the same. Rotational language mentioned with NREL; students did not complete NREL rotations.

- Question if any requirements were changed; Braun reported all requirements remain consistent, changes are only to create an up-to-date Catalog entry.

2.2 CHEMICAL & BIOLOGICAL ENGINEERING
[CIIM 11/10; Provost 11/11]

Melissa Krebs

1 new course: CBEN532: TRANSPORT PHENOMENA IN BIOLOGICAL SYSTEMS

This graduate CBE course will advance the Mines 150 mission by providing our graduate students with the fundamental and state of the art industry relevant modeling and experiment experience and application to contribute to “professionally oriented postgraduate education”, as well as strengthening the “affinity for Mines among our students, alumni, and external partners”.

Cross listing for CBEN432. Krebs noted graduated students interested in taking the course for additional electives. Graduate students to complete an additional project to receive 500-level credit.

2.3 COMPUTER SCIENCE
[CIIM 11/11; Provost 11/11]

Bo Wu

1 new course: CSCI500: GRADUATE SEMINAR

Graduate seminars with mandatory attendance benefit students, the department and Mines in two major ways:

1) Seminars are often held by external people visiting Mines (either for interviewing a faculty position or collaboration opportunities). Making these seminars as part of the graduate curriculum will significantly improve attendance, which will in turn positively reflect on visitor’s impression of Mines.

2) Students often overlook the benefits they will obtain from such talks, and most of them end up not attending the seminars. By making the seminars mandatory, overall state-of-the-art knowledge that our graduate students will collect during their education will increase. Moreover, they will have more chance to make connections for their connections. Better educated grad students will benefit both the CS dept. and Mines positively.

2.4 CSM SYSTEM
[CIIM 11/15; Provost TBD]

Ali Tura

1 new course: SYGN521: GEOLOGICAL CARBON CAPTURE UTILIZATION AND
SEQUESTRATION (CCUS)

This is one of the four courses for the new CCUS Certificate program at Mines. The program started recently and has been very successful for a graduate certificate degree. Over 30 students took the class in the first offering last semester. The credits can also be used towards a MSc or PhD degree.

Request for permanent number for 598 listing.

Suggestion made to consider a CCUS prefix. SYGN prefix routes to the Registrar and does not map to a particular department; SYGN used for professional development courses. Faculty teaching in SYGN not receiving credit for SYGN courses.

MINING

Jamal Rostami

2.5

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.

Continuing Business – from 11/2/22

Non-Compliance with HLC Assumed Practices

Tim Barbari

Councilors asked to distribute proposed language to department for question and further discussion. Continued discussion abled for 12/7 due to time.

Adjourn

Tina Voelker

Meeting adjourned: 5:06 pm.

Next meeting: December 7, 4:00-5:00 pm via Zoom. Please send all agenda items to Mara Green (mgreen1@mines.edu) 1 week in advance.
**Consent Agenda** The following proposals will **not** be discussed unless specifically requested by Council. Please review the following items. With no objections, approval is implied and items will be processed accordingly.

4.1 **Approval of Minutes** – October 19, 2022 Tina Voelker

4.2 **ENERGY** Robert Braun

[CIM 11/9]

4 course changes:  
**ENGY501: PHYSICS OF RESOURCES & CONVERSION**  
*Changing course title to more closely align with course content. Course content, credit hours, and course delivery are not changing. Was “Energy Resources and Electric Power Systems”.*

**ENGY503: ENERGY & POWER SYSTEMS INTEGRATION**  
*Was “Energy Systems Integration and Efficiency”.*

**ENGY691: INTRODUCTION TO RESEARCH METHODS IN THE ENERGY SCIENCES**  
*Was “NREL Rotation: Analysis of Integrated Energy Systems”.*

**ENGY692: PROJECT FOCUSED RESEARCH IN ENERGY SCIENCE & TECHNOLOGY**  
*Was “NREL Rotation: Energy Science & Technologies”.*

4.3 **CHEMICAL AND BIOLOGICAL ENGINEERING** David Marr

[CIM 11/9; Provost 11/11]

1 new course:  
**CBEN508: NATURAL GAS PROCESSING**  
*This course will be cross-listed with CBEN408 so that graduate students may also take advantage of this course. Natural Gas is a major component of the energy transition and UG and Grad alike will benefit from learning the basics of this important fuel. This is a residential course.*