

Colorado School of Mines – GRADUATE COUNCIL MEETING MINUTES
 January 4, 4:00 – 5:00 pm, via Zoom

Attendees:

Voting Members: 23 total (12 - majority needed for quorum). Quorum was present

P	Bettina Voelker (Chair)	A	Christine Baker (LB)	P	Andy Osborne (NSE)	A	Owen Hildreth (ME)
A	Eric Anderson (HSE)	P	Soutir Bandyopadhyay (AMS)	P	Jamal Rostami (MN)	P	Michael Heeley (EB)
P	Jeffrey Shragge ((GP)	P	Juan Lucena (EDS)	A	Jim Ranville (GC)	A	Luis Zerpa (PE)
A	Kester Clarke (MME)	P	Uwe Greife (PH)	A	Danica Roth (GE)	P	Bo Wu (CS)
A	Jay Straker (HASS)	A	Dave Marr (CBE)	A	Liam Witteman (GSG)	A	Lori Tunstall (CEE)
P	Christine Morrison (CH)	P	Atef Elsherbeni (EE)	P	Gabriel Walton (UCTE)		

Other Regular Attendees and Guests

P	Tim Barbari (OGS)	P	Carolyn Freedman (OGS)	A	Jenny Briggs (OGS)	P	Mara Green (AA)
A	Wendy Adams (HNRS)	A	D. Scott Heath (RO)	P	Paul Myskiw (RO)	A	Roxane Aungst (OGS)
A	Sam Spiegel (Mines Online)	A	Suzanne Beach (Payne)	A	Jen Gagne (Grad Admissions)		

Special Guest(s): Valerie Holt (AES)

Welcome

Tina Voelker

Briefings and Information Items

Office of Graduate Studies

Tim Barbari

Barbari provided an update to Councilors that a notification would be sent to department heads and IGP directors on a ten percent top off fellowship for Fall 2023. The fellowship is geared off of underrepresented groups at Mines based off of application responses and personal statements. It is a PhD fellowship.

Registrar’s Office

Paul Myskiw

End of term processing in December went well. Very few grades were missing the day after the grading deadline.

A shift in the Catalog deadlines is being proposed to provide additional time for changes, particularly in relationships with HLC and core curriculum changes.

An invitation was sent to faculty and administrators at Mines for a webinar on student mental health on 1/11.

Graduate Student Government

Liam Witteman

No updates from Graduate Student Government.

Non-Compliance with HLC Assumed Practices

Tim Barbari

Graduate Programs and Combined Programs

Feedback was received on what constitutes graduate credit. A change in combined program language was proposed by Barbari. An excerpt of the HLC Assumed Practices was provided:

“An institution may allow well-prepared advanced students to substitute its graduate courses for received or elective courses in an undergraduate degree program and then subsequently count those same courses as fulfilling graduate requirements in a related graduate program that

1.2 **CHEMICAL & BIOLOGICAL ENGINEERING** David Marr
[CIM 11/10; Provost 11/11]
1 new course: CBEN532: TRANSPORT PHENOMENA IN BIOLOGICAL SYSTEMS

MOTION: To approve the new course CBEN532: Transport Phenomena in Biological Systems by Rostami, seconded by Morrison. Motion passed unanimously.

1.3 **COMPUTER SCIENCE** Bo Wu
[CIM 11/11; Provost 11/11]
1 new course: CSCI500: GRADUATE SEMINAR

MOTION: To approve the new course CSCI500: Graduate Seminar by Morrison, seconded by Rostami. Motion passed unanimously.

1.4 **CARBON CAPTURE UTILIZATION & STORAGE** Ali Tura
[CIM 11/15; Provost 11/17]
1 new course: CCUS521: GEOLOGICAL CARBON CAPTURE UTILIZATION AND SEQUESTRATION (CCUS)

MOTION: To approve new course CCUS521: Geological Carbon Capture Utilization and Sequestration (CCUS) by Heeley, seconded by Morrison. Motion passed unanimously.

1.6 **MINING** Jamal Rostami
[CIM 11/14]
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.

MOTION: To approve the program change to MP-MEM: MP – Mining Industry Management (MP-MIM) by Morrison, seconded by Heeley. Motion passed unanimously.

4:50-4:55 pm **New Business**

2.1

PHYSICS

Uwe Greife

[CIM 12/13; Provost 12/13]

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.

The department would like to offer a non-thesis physics masters and would run parallel to the thesis masters. Note made that this may be an option for students not doing so well in their PhD research.

2.1.1

[CIM 12/13]

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.

The thesis will provide less theory than the non-thesis option; department believes students taking the program will be primarily interested in going into industry. Required and elective courses were filled in a way to gear toward industry.

The change is to both the masters and PhD core. Topics were redistributed and a graduate laboratory course was introduced instead of theory.

2.1.2

[CIM 12/9; Provost 12/9]

1 new course: PHGN515: GRADUATE LABORATORY

- 2.3 **APPLIED MATHEMATICS & STATISTICS** Soutir Bandyopadhyay
[CIM 12/12]
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.

CAM faculty recommended the change in order to provide CAM students with a well-rounded theoretical skill set

- 2.4 **MECHANICAL ENGINEERING** Owen Hildreth
[CIM 12/13]
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.

4:55-5:00 pm **Continuing Business** – from 11/2/22 and 11/16/22

- 3.2 **ECONOMICS AND BUSINESS** Michael Heeley
[CIM 12/4]
1 course change: EBG525: BUSINESS ANALYTICS
Change to the learning objectives and Catalog description to accurately reflect what is being taught in the course. This course is now focused on providing a foundation on descriptive analytics. The material on prescriptive analytics that was covered in prior versions will be covered in a new ETM elective course.

- 3.2.1 [CIM 12/4; Provost 12/5]
1 new course: EBG527: BUSINESS OPTIMIZATION MODELS
This course provides skills on modeling business problems to obtain optimal decisions and insights, that mainly differentiates business analytics from data analytics. It contributes to Mines@150 Mission by contributing to the education in business, specifically by providing skills to solve “the world’s most pressing challenges”. The course will be delivered face to face. This course will teach the prescriptive analytics material (in more depth) that used to be taught as part of EBG525 which now focuses on descriptive analytics.

MOTION: To approve the course change to EBG525 and the new course EBG627 by Morrison, seconded by Heeley. Motion passed unanimously.

New Business

Voelker asked Council to be prepared for additional Council meetings in late March and through April to continue HLC discussion and additional changes.

Adjourn

Meeting adjourned: 5:00 pm.

Next meeting: January 18 4:00-5:00 pm via Zoom. Please send all agenda items to Mara Green

Tina Voelker

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 – December 7, 2022**

Tina Voelker