Colorado School of Mines – GRADUATE COUNCIL MEETING MINUTES
March 15, 4:00 – 5:00 pm, via Zoom

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

P	Bettina Voelker (Chair)	P	Christine Baker (LB)	P	Andy Osborne (NSE)	P	Owen Hildreth (ME)
P	Eric Anderson (HSE)	P	Soutir Bandyopadhyay (AMS)	P	Jamal Rostami (MN)	A	Michael Heeley (EB)
P	Jeffrey Shragge (GP)	A	Juan Lucena (EDS)	A	Jim Ranville (GC)	P	Luis Zerpa (PE)
A	Kester Clarke (MME)	P	Uwe Greife (PH)	P	Danica Roth (GE)	P	Dong Chen (CS)
A	Jay Straker (HASS)	P	Dave Marr (CBE)	P	Liam Witteman (GSG)	P	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)	A	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)	P	Kendra Stansbury (RO)

Special Guest(s): Megan Abbey (Associate Director of International Student and Scholar Services (ISSS))

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Welcome   Tina Voelker

Briefings and Information Items

<u>Office of Graduate Studies</u>   Tim Barbari

Barbari noted several departments reached out about the minimum stipend increase to $32,000 for Fall 2023. Barbari to attend the Earth and Society Programs (ESP) portfolio department heads meeting on 3/30 for brainstorming.

Barbari with OGS and the Registrar's Office are working with the OnBase team to transition several graduate forms into an electronic format in OnBase. Barbari to bring workflows to Councilors' attention. The largest form being addressed is the thesis committee form.

- **Question** on how the OnBase transition will work with the Workday implementation; Barbari reported everything in OnBase would remain within the system, like graduate contracts, for workflows. Barbari reported OnBase forms and Banner are integrated. Finance and Human Resources would move to Workday; Workday for students is not available.

<u>Registrar's Office</u>   Paul Myskiw

Myskiw provided review of the new Trailhead or "Experience" project which provides an updated user interface and modules or cards. The new UI would be established 3/20. Specific cards differ between students and faculty; cards can be rearranged, added to, and further customized with links and necessary information for the individual faculty.

- **Question** if Trailhead is going away; Myskiw reported the name "Trailhead" is not going away, but the platform is being replaced by Ellucian Experience which is a product owned by the software vendor behind the student information system, Banner.

<u>Graduate Student Government</u>   Liam Witteman

Witteman provided a brief update. A thesis student from the University of Colorado: Denver, thesis work in urban planning, looked to Mines to establish an RTD route between G Line and Downtown

Golden.

Items for Council Vote from 2/15/23
<u>Incorporating Internships into Degree Programs</u>   Tim Barbari
                                                                                 Megan Abbey

Barbari noted some language was updated to keep the credit-bearing internship course like an independent study. The course mirrors independent study in that approval should be sought by the student.

Abbey reported working with Barbari and undergraduate programs to revise practices to be in line with policy and regulations regarding anything involving internships and volunteer practical opportunities for international students, specifically. International students require additional authorization to do any employment activities off-campus. Curricular practical training (CPT), or internships, need to meet two standards: it must be an integral part of an established curriculum and it must be related to the students' major area of study. Abbey noted it is a means of recruiting international students, as well. Abbey noted a Student and Exchange Visitor Program (SEVP) liaison visited, the liaison works with several schools on hosting international students, and had noted Mines was not in compliance.

Barbari noted the course cannot be only for international students to be seen as an integrated part of established curriculum, and should be offered to all students.

- **Question** if a student selecting the course, outside of the degree's current list, would be considered integral; Barbari agreed this would be considered integral. Barbari noted the course is three credits to mirror independent studies and fit into the typical thirty credit degree program. Worry had been voiced on variable credits on the course. Myskiw noted it would be best to maintain courses within the term dates.
- **Question** if the three credits would limit international students that take multiple internships; Barbari confirmed the course would remain three credits to fit into programs. Abbey confirmed a student can do as much CPT as allowed by the institution. Regulations allow students to complete fulltime or part-time CPT. If a student does a full year of fulltime CPT, they are no longer eligible for optional practical training (OPT) which is post-graduation worth authorization. Students can take multiple, part-time CPTs as there is no limit on the immigration side (the institution can set limitations). The student needs to maintain fulltime status while doing CPT, this differs during the summer. More than twenty hours is considered fulltime. Each term would need to be renewed.
- **Question** if students receiving payment during the internship contradicts other policies; Barbari reported the best practice for internships now is to provide payment and course credit. Lack of payment within companies can cause legal, employment issues.
- **Question** if it is feasible to do program changes to allow the credit-bearing course as a specific option; Barbari noted with the urgency the change presented to Council was an institutional part prior to moving to specific program changes. The language would be placed within the Catalog alongside the course information.
- **Question** on adding the visa information into the Catalog when the information could be added to the internship form; Abbey reported students go to OGS first, the location of the information could be variable.

Myskiw noted the course as an established part of the curriculum, the course should count towards the degree and not be an excessive credit. Myskiw noted a volunteer could not be doing a job in the same

place that a paid job was being done.

Suggestion made to set an upper limit of repeats for the course.

MOTION: To vote to approve the credit-bearing internship course by Greife, seconded by Hildreth. Motion passed unanimously.

1.2   **GEOLOGY & GEOLOGICAL ENGINEERING**   Wendy Zhou
         [CIM 2/7]
         1 program change: CRMS-GISG: GIS & GeoInformatics – Certificates and MSNT
         Because this is newly formed into the GIS master's degree as an ONLINE degree, there are a few changes to this program.

MOTION: To vote to approve the program change to CRMS-GISG: GIS & GeoInformatics – Certificates and MSNT by Morrison, seconded by Roth. Motion passed unanimously.

Continuing Discussion from 2/1/23 and 3/1/23
Mandatory Dismissal below 2.0 GPA   Tim Barbari
Barbari reported the topic would be on hold as Barbari investigated other options.

2.2   **ENGINEERING, DESIGN, AND SOCIETY**   Jeffrey Shragge
         [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.

EDNS515 had been added to provide additional background to students coming into the program, EDNS590 was moved to the electives list. EDNS579 was created to remove the 400-level from the course; EDNS479 was a program requirement noncompliant with HLC Assumed Practices.

MOTION: To vote to approve the program change to MSCR-HES: Humanitarian Engineering and Science by Greife, seconded by Shragge. Motion passed unanimously.

2.3   **ECONOMICS AND BUSINESS**   Michael Heeley
         [CIM 2/19; Provost 2/19]
         1 new course: EBGN502: POLITICAL ECONOMY OF THE ENERGY TRANSITION
         This course is a required class in the Carbon Capture Utilization and Storage (CCUS) graduate certificate program. The certificate program is part of Mines @150 plans to increase online professional graduate programs. Like the whole CCUS program, this course is offered online. The responsible faculty underwent Trefny Center Development in the Fall of 2021 with a course developer.
MOTION: To vote to approve the new course EBGN502: Political Economy of the Energy Transition by Shragge, seconded by Morrison. Fourteen (14) for, zero (0) against, one (1) abstention. Motion passed.

2.4   **APPLIED MATHEMATICS & STATISTICS**   Soutir Bandyopadhyay
       [CIM 2/16; Provost 2/16]
       2 new courses: MATH533: TIME SERIES AND ITS APPLICATIONS
       The goals of this course are to develop an appreciation for the richness and versatility of modern time series analysis as a tool for analyzing data and still maintain a commitment to theoretical integrity. The advent of inexpensive powerful computing has provided both real data and new software that can take one considerably beyond the fitting of simple time domain models. This course is designed to be useful for students facing the analysis of time-correlated data in the physical, biological, and social sciences. It is intended for upper-level undergraduate students and beginning graduate students. This course will be taught interactively with some hands-on data manipulation using R. Industry expectations dictate a certain amount of expertise in data manipulation and analysis. The goal of this course is to better prepare the students for statistical computing in future course work and their careers once they graduate from Mines.

       MATH552: KERNEL-BASED APPROXIMATION METHODS
       Positive definite kernels play an important role in many different areas of mathematics, statistics, science, and engineering. These kernels are put into perspective, both historically, as well as scientifically via connections to related fields such as analysis, approximation theory, the theory of integral equations, mathematical physics, probability theory and statistics, geostatistics, statistical or machine learning, and various kinds of engineering or physics applications. None of these fields is given a thorough theoretical treatment. Instead, these topics are presented via their relation to positive definite kernels. A sound approximation-theoretic foundation will be complemented by many computational illustrations in the context of applications from data fitting, the numerical solution of PDEs, and machine learning. New and recent developments in the field will also be featured. Coursework will consist of theoretical as well as coding assignments in the form of bi-weekly projects. This course, therefore, provides students with an important foundation for careers in fields relying on data-driven computational applied mathematics or statistics.

MOTION: To vote to approve the two (2) new courses in item 2.4 in an omnibus Council vote by Bandyopadhyay, seconded by Morrison. Fourteen (14) for, zero (0) against, one (1) abstention. Motion passed.

Faculty Mentorship Feedback Program   Christine Morrison
Morrison noted Council had left off with brainstorming for a home for the faculty mentorship feedback program such as DI&A, the prospective ombuds office, consideration had been made for working with Lakshmi Krishna, but representatives had not been available at Council.

Suggestion made to house the program within the Faculty Senate with faculty for faculty improvement.

Morrison provided concepts for the program in the future, including an opportunity for students experiencing issues with a PI. Barbari noted higher-level decisions would be needed for mentorship to factor into teaching evaluations and research evaluations. Councilor noted that reviews of early faculty may be differentiated due to having less students.

Barbari reported the National Science Foundation (NSF) would be changing its Responsible and Ethical

Conduct of Research (RECR) expectations to include all faculty, in addition to students and postdocs, regarding RECR training. It would include efforts around mentorship.

Councilor agreed the use of the program as an evaluative metric may be too early to consider.

Adjourn   Tina Voelker
Meeting adjourned: 5:03 pm.
Next meeting: April 5, 4:00-5:00 pm via Zoom. Please send all agenda items to Mara Green (mgreen1@mines.edu) 1 week in advance.

<u>Consent Agenda</u> The following proposals will <u>not</u> be discussed unless specifically requested by Council. Please review the following items. With no objections, approval is implied and items will be processed accordingly.

3.1   **Approval of Minutes** – March 1, 2023   Tina Voelker

3.2   **GEOLOGY & GEOLOGICAL ENGINEERING**   Danica Roth
             [CIM 2/28]
             1 program change: MPMEMSPHD-GE: MP, ME, MS & PhD – Geology & Geological
                                        Engineering
             Adding GEGN 568 - "Point Cloud Data Analysis for Scientists and Engineers" to the list of course options satisfying program course requirements for MS - nonthesis, MS - thesis and PhD degrees. This is a new course (Spring 2023 is its third iteration) that received its official course number this year and will be a useful addition to the topical offerings for this program.

3.2.1   [CIM 3/6]   Cheryl Medford
             1 course change: GEGN532: GEOLOGICAL DATA ANALYSIS
             Dr. Singha would like to add MATH 332 (or equivalent) as a prereq to GEGN 532.

3.3   **METALLURGICAL AND MATERIALS ENGINEERING**   Nancy Progar
             [CIM 3/1]
             1 program change: MEMSPHD-MT: ME, MS & PHD – Metallurgical & Materials Eng
             We added thesis-based programs to the double counting language.

3.4   **ECONOMICS AND BUSINESS**   Michael Heeley
             [CIM 3/1]
             1 program change: MS-ETM-NT: Engineering and Technology Management (ETM)
                                        Master of Science
             Making changes to align with HLC.