

Colorado School of Mines – GRADUATE COUNCIL MEETING MINUTES
November 17, 4:00 – 5:00 pm, via Zoom

Attendees:

Voting Members: 21 total (11 - majority needed for quorum). Quorum was present

A	Bettina Voelker (Chair)*	P	Christine Baker (LB)	P	Andy Osborne (NSE)	A	Owen Hildreth (ME)
P	Eric Anderson (HSE)	P	Karin Leiderman (AMS)	P	Jamal Rostami (MN)	P	Michael Heeley (EB)
P	Ebru Bozdag (GP)	P	Juan Lucena (EDS)	A	Jim Ranville (GC)	P	Luis Zerpa (PE)
P	Geoff Brennecka (ML)	P	Jeremy Zimmerman (PH)	P	Danica Roth (GE)	P	Qi Han (CS)
P	Elizabeth Davis (HASS)	P	Dave Marr (CBE)	P	Maxwell Silver (GSG)	P	Lori Tunstall (UCTE / CEE)
P	Christine Morrison (CH)						

Other Regular Attendees and Guests

P	*Tim Barbari (OGS) proxy for Bettina Voelker (chair)	P	Carolyn Freedman (OGS)	A	Jane Ko (AA)	P	Mara Green (AA)
A	Jennie Kenney (AA)	A	Denise Winn-Bower (PE)	A	Paul Myskiw (RO)	P	Kendra Stansbury (RO)
A	Deb Jordan (Trefny)						

Special Guest(s): Angel Abbud-Madrid (MN), Joe Crocker (CEE)

Welcome

Tim Barbari

Barbari introduced as proxy for Voelker; out sick.

Briefings and Information Items

Office of Graduate Studies

Tim Barbari

No updates from the Office of Graduate Studies.

Registrar's Office

Kendra Stansbury

Stansbury reminded Councilors that grades should be submitted as soon as possible with the extended Winter Break announcement from President Johnson. Grade submissions have a quick turn around in order for availability of grades on transcripts for awarding degrees. Stansbury suggested submission of grades by Friday, 12/17. Announcements will be sent out following the week of Thanksgiving Break.

Stansbury reminded Councilors that Spring section waitlists should be made. Any questions can be sent to the Registrar's Office.

Graduate Student Government

Maxwell Silver

No updates from Graduate Student Government.

Graduate Council Operations

CIM Email notification test

Green conducted a test on CIM email notifications for courses. Notifications for CIM submissions come from Courseleaf mines@notify.courseleaf.com. Two Councilors noted having not received notifications; email list was updated with these names.

Changes in Program Modality

Discussion on how Council would like to handle an existing graduate program adding an online variant of the same program. Programs would want to develop an online program in addition to the residential degree program.

Question raised on Trefny Center oversight for courses versus degrees and if all courses have been approved by the Trefny Center would a program be automatically approved for online delivery; one suggestion made that if all learning outcomes remain the same and are packaged into a program, the program would be considered as an online program.

Options for Council could include this modality change as a program change requiring Council approval or an information item to announce the change to Council without need for an approval process. Suggestion made to still bring these items to Council, as modality changes to courses are brought to Council as well.

Comment raised on the duration of the Trefny process for online course development causing delays leading to students needing to travel to campus to take a course that may not have been developed for online delivery yet; suggestion made to use Graduate Council as a checkpoint to assure all courses have been developed within the program to constitute a fully online program.

Curriculum Items – Request for Vote (from 11/3/21)

Council voted to suspend 2-week rule for item 1.1

- 1.1 **CIVIL & ENVIRONMENTAL ENGINEERING** Lori Tunstall
[CIM 10/26; Provost 10/26-27]
1 new course: CEEN526: DURABILITY OF CONCRETE
Industry is shifting away from strength-only considerations for concrete design and is moving toward designing for both durability and sustainability as well. This course will prepare students for this inevitable shift in design. As such, it will not only expand the current offerings, but will also support two Mines@150 goals: 1) to be a leader in educating STEM students and professionals and 2) to be an accessible and attractive option for qualified students from all backgrounds.

MOTION: To approve the new course in Civil and Environmental Engineering, CEEN526: Durability of Concrete by Brennecka, seconded by Zimmerman. Motion passed unanimously. APPROVED.

New Curriculum Items

- 2.1 **MECHANICAL ENGINEERING** Angel Abbud-Madrid
[CIM 11/10; Provost 11/11]
1 new course: SPRS507: ADVANCED PLANETARY GEOLOGY
The Space Resources fully-online graduate program is the first one in the world educating scientists, engineers, economists, entrepreneurs, and policy makers in the field of space resources. This one-of-a-kind, innovative, multidisciplinary program aims to take the 150-year-old, world-renown expertise at Mines in resource exploration, extraction, production, and utilization to its next frontier by identifying, extracting, and utilizing resources beyond Earth.

This online course provides a detailed look at planetary bodies, from atmosphere to surface to interior with a focus on the geological processes that have formed then transformed these bodies over time, with special attention paid to the formation of space resources.

THE COURSE WAS SUCCESSFULLY RUN AS A SPECIAL TOPICS COURSE IN SPRING 2021 and FALL 2021.

The course has been offered as a special topics course a number of times and was popular. Students are provided an understanding of planetary geology from the point of view of space resources. This course is offered as an elective and is viewed as intense; not all students may take it and are offered the option of planetary geology through the Geology department which is a cross-listed undergraduate and graduate course for six-weeks in the summer.

The only prerequisite for the course is SPR501. Kevin Cannon will be teaching the course.

2.2 **CIVIL & ENVIRONMENTAL ENGINEERING**

[CIM 10/26; Provost 10/26-27]

Joe Crocker

2 new courses: CEEN547: DESIGN OF PRESTRESSED CONCRETE STRUCTURES

The addition of this graduate course will provide our students the opportunity for exposure to increasingly important design concepts that have the potential to significantly reduce the amount of concrete required for construction versus the traditional reinforced concrete design methods and in doing so reduce the impact new construction has on the environment. Such a course is required to maintain our ability to produce structural engineering graduates with knowledge of the most current design technologies.

The course will complete the suite of offerings that are recommended by the structural engineering institute for graduate students in the field. The course has been offered twice as a trial. Undergraduate and graduate students attended the trial; graduate students did best within the course.

[CIM 10/26; Provost 10/27]

Lori Tunstall

CEEN597: PRACTICES AND PRINCIPLES OF ENVIRONMENTAL CONSULTING

The course introduces students to the business concepts, tools and terminology used in the environmental consulting industry. Depending on Mines requirements, this course may be delivered as a person-to-person (preferred), hybrid, or remote class.

A large share of Mines graduate students find employment, either temporarily or permanently in the environmental/engineering consulting arena. Many are not fully prepared for this line of work, as they've not been exposed to the project-driven, business-oriented implementation aspects of this workplace. This course allows students to explore this field of employment before committing to it and prepares the for success if his is their chosen career.

Class is taught by two highly-regarded industry experts with 50 years of environmental consulting experience between them. Additionally, guest lectures are a key part of the course, with a diverse group of experienced people bringing their perspectives on the environmental consulting industry from municipal, state and federal government, small business ownership, and private sector clients.

The course will provide students on a background and understanding of what environmental consulting consists of, the language around it, concepts, and practical experience. The course has been designed to

be taught by industry experts and will see adjunct professors and guest lectures in the structure of the course.

Comment made on the justification sentence mentioning both undergraduate and graduate students and if a 400-level course is being taught as well; the course is for graduate students alone and the justification has been updated to reflect this.

2.3 **GEOLOGY & GEOLOGICAL ENGINEERING** Danica Roth
[CIM 10/21]
1 course change: GEOL520: NEW DEVELOPMNETS IN THE GEOLOGY AND
EXPLORATION OF ORE DEPOSITS
Course last taught in 2019. Has been enhanced to become a 3-credit course (formerly 2-credit).

The course was edited to include an additional eleven hours of lecture and six hours of lab, equivalent to 1.04 credits. The course is a block-mode intensive course over six days. Confusion on how the block schedule configuration works for admissions, financial aid, and the Registrar's Office. Barbari noted a three-credit course in a regular semester has an expectation of students spending roughly ten hours a week in and out of class.

The Colorado Department of Higher Education (CDHE) and Mines' accreditor has a guideline for every one hour in contact, two to three hours are expected outside of class.

Additional clarification was asked for the method of teaching the six-day course.

NOTE: Request was made 11/19 to retract the edits to this course.

Adjourn

Tim Barbari

Meeting adjourned: 5:17 pm

Next meeting: December 1, 4:00-5:00 pm via Zoom. Please send all items for agenda to mgreen1@mines.edu 1 week prior.

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.

3.1 **Approval of Minutes** – November 3, 2021 Tim Barbari

3.2 **MECHANICAL ENGINEERING** Carolyn Freedman
[CIM 11/10]
1 program change: CERTMSPHD-SPACE: CERT, MS, & PhD - Space Resources
Change for 2022-23 Catalog is to reflect SPRS 507 Advanced Planetary Geology course moving from a special topics course to a regular course. (see Table 3)

4.1 **Continuing Curriculum Items** (from 10/20/21) Ian Lange
ECONOMICS AND BUSINESS
[CIM 10/14]
1 program change: MSPHD-ECO: MS & PhD – Mineral & Energy Economics
4+1 language added for Western Colorado.