

Colorado School of Mines – GRADUATE COUNCIL MEETING MINUTES  
 October 21, 2020 | 4:00 – 5:00 pm, via Zoom

**Attendees:**

**Voting Members:** 24 total (13 - majority needed for quorum). Quorum was present

P	Neal Sullivan (Chair)	P	Amy Hitchner (LB)	P	Andy Osborne (NSE)	A	Owen Hildreth (ME)
A	Dave Benson (HSE)	P	Karin Leiderman (AMS)	A	Ugur Ozbay (MN)	P	*Hedayat proxy for Gabe Walton (UCTE)
P	Ebru Bozdog (GP)	P	Juan Lucena (EDS)	P	Jim Ranville (GC)	A	Zhenzhen Yu (MME)
P	Geoff Brennecka (ML)	P	Tulay Flamand (EB)	P	Danica Roth (GE)	P	Dejun Yang (CS)
P	Elizabeth Davis (HASS)	P	David Marr (CBE)	P	Maxwell Silver (GSG)	P	Luis Zerpa (PE)
P	*Reza Hedayat (CEE)	P	Christine Morrison (CH)	P	Gongguo Tang (EE)	P	Jeremy Zimmerman (PH)

**Other Regular Attendees and Guests**

A	Justin Bush (CEE)	P	Carolyn Freedman (OGS)	P	Jane Ko (AA)	P	Jennifer Veloff (Tref)
P	Tim Barbari (OGS)	P	Kendra Stansbury (RO)	P	Paul Myskiw (RO)	P	Denise Winn-Bower (PE)
P	Dorothy Cheng (CS,EE,ME)	A	Jennie Kenney (AA)				

Hua Wang attended as a guest from Computer Science

**Welcome**

**Neal Sullivan**

As reflected by a change in agenda structure, Sullivan is looking forward to Council working more efficiently and tackling broader projects.

**Briefings and Information Items**

• **OGS**

**Tim Barbari**

No updates from OGS

• **Registrar**

**Paul Myskiw**

Registrar’s office has completed preliminary room scheduling for the Spring semester. They have landed on 41% F2F lecture classrooms right off the bat. They will be following up with departments and chairs to gauge the exact wants and needs. Good news is they should hit close to the 50% desired by upper administration. This is the total for UG and Grad classes combined.

Myskiw clarified that Spring F2F numbers were specific to Lectures only. The Fall numbers included hybrid and lab courses, which brought the total number of in-use classrooms to 65%.

Faculty will have the opportunity to evaluate the rooms they have been assigned to. Myskiw added that there would be some additional negotiations and spacing available in early November. If a room is unsatisfactory, Registrar will work with departments to find a solution. Mines is most limited in terms of large lecture options.

Councilors addressed concerns about students opting into remote or F2F delivery as all or nothing being a hard line. F2F students might feel obligated to appear in person. Myskiw stated there would be language in the messaging to students and faculty encouraging them to be flexible and make arrangements based on any changing circumstances.

Survey results will be released to department heads and actual numbers will not be known until students are actually registered.

Myskiw described the difficulties during Fall registration, since courses were in flux or changed without input and students were told to do whatever they preferred. Faculty could not police this. Heading into Spring, there is a better sense of what students and faculty want. Class schedules now list the delivery modalities, so individuals can make informed and consistent decisions.

- **Graduate Student Government**

**Maxwell Silver**

GSG is debating thoughts on Spring Break. There has been some disconnect and frustration due to administration soliciting feedback from Undergraduate Student Government but not reaching out to Graduate Student Government.

Myskiw informed Silver that he is the chair of the Calendar Committee and there is a GSG representative serving on the committee. Silver will contact this representative.

**Miscellaneous Business/Open Discussion**

**Neal Sullivan**

- Research ethics training for all research-active faculty and students
  - Office of Research and Tech Transfer has issued email all
  - While original draft email reflected optional training, the training is now mandatory
  - Encourage research ethics training
    - Signature Student Experience
    - NSF and NIH ethics stipulation in Grant Proposal Guides
  - Enrollment options
    - Existing credit-bearing CSM courses: SYGN 502 (open to all disciplines), CBEN 568, CHGN 540, or PHGN 503
    - Online training (no credit): Collaborative Institutional Training Initiative (CITI)
  - Target date: January 31, 2021
  - Refresher training every five years

VPRTT sent an email out to research-active faculty and students, discussing requirements for ethics training. There was some confusion as to whether this training was actually considered mandatory and Council noted discrepancies between communications sent to various populations of faculty and students.

Council raised the question of if/how/why Graduate Council is procedurally involved in this topic. Faculty members had brought this issue to Sullivan, since it was interpreted as a potential new required course for graduate students.

Barbari strongly cautioned VPRTT from using language that sounded like a credit bearing degree requirement. In the version he saw, VPRTT was negotiating the line of research ethics training as something expected and recommended of research active people, similar to safety training. Barbari will work with Scott Allen to clean up language and provide a consistent message for research-active students and faculty.

Lucena had concerns about managing redundancies as many projects currently have internal ethics education and training mechanisms. Sullivan asked Lucena if he could outline these points in writing, as this was likely one example of many. Then Sullivan could bring this feedback to VPRTT. Lucena will confer with his team first and draft language.

- Scheduling and Spring Break during the pandemic
  - Keep Spring Break “as-is”
  - Distributing long weekends through single or double days off (like Fall Break)
  - Distribute course-level Spring Breaks across the semester (each course has a bye-week)
  - Move Spring Break towards end of semester; handle it like Thanksgiving Break(unclear)

Sullivan polled Councilors for input on rescheduling Spring Break.

Silver reiterated that GSG has been discussing the issue but they have not come to a consensus on a favorite option. There was widespread dislike of the individually separated and not connected days approach. They would like to at least consider long weekends to provide a real break

Councilors advocated for families and faculty with children, who may be extra burdened by a change in Spring Break structure. There was apprehension about how random days off or long weekends would significantly impact class scheduling, particularly with labs, and create added confusion for students and faculty.

Barbari expanded on the option to push Spring Break later in the semester, to function similarly with Thanksgiving Break this Fall. If it’s close to the end of the semester, the students would just not return to campus.

According to Peter Han, Jefferson County is moving forward with Spring Break as originally planned and Mines is usually aligned. But it is likely Mines’ upcoming Spring Break will be changed in some way.

Faculty Senate seems to share these concerns. Sullivan encouraged councilors to share additional feedback with him via email and Graduate Council’s voice will be heard through Senate.

- Ideas on what Graduate Council should work on. Areas of interest include:
  - Targeted subcommittees
    - i. Graduate student stipends - minimums, variability, and living wages
    - ii. 0 credit courses
    - iii. Research Advisor-Advisee Procedures and Expectations
    - iv. Growing importance of interdisciplinary programs
      - Staffing and instructional credit for interdisciplinary programs
    - v. Pathways forward when student-advisor relationships fail
    - vi. Staffing of subcommittees
  - Post-baccalaureate certificate language revisions

Council discussed the use of targeted subcommittees as a means to divide up and advance bigger issues. Subcommittees can expedite policy initiatives by crafting language to address specific problems, which can then be reviewed by Council as a whole.

Items iii. and v. will be combined (Research Advisor-Advisee Procedures and Expectations + Pathways forward when student-advisor relationships fail).

Barbari requested an additional subcommittee dedicated to assisting him and the Office and Graduate Studies with major policy revisions (i.e. how students qualify for reduced registration).

Leiderman wished to address graduate student contracts when they are admitted, and more specifically how graduate students are funded/supported. Barbari thought this could be combined with item i. Graduate Student Stipends, to assess long-term overall funding goals and commitments for graduate students. Silver agreed that longer term funding commitments for graduate students was an important topic that should be addressed in the subcommittee.

Councilors were asked to let Sullivan know which areas interested them the most. Otherwise, he will assign members to the subcommittees and appoint a chair for each.

There was a suggestion to create a Google Doc survey where Councilors could rank their first, second, and third subcommittee preferences. Sullivan liked the idea of ranking subcommittee choices and will look into the Google Doc.

Subcommittee pages have been created in Microsoft Teams, so assignments will likely be formalized there. Moving forward, Grad Council can use Teams to do the work.

Barbari proposed that Grad Council could convene as a whole for the first part of the meetings, then use the second part to breakout into subcommittees. That may be more palatable than scheduling separate external meetings. Neal agreed and shared that Faculty Senate was doing something similar.

Barbari will be working on cleaning up front end language defining Post-Baccalaureate Certificates. (This was also briefly addressed under Curriculum Item 3.2.)

- Prefixes for approved BIOL5XX

Leiderman had a question about assigning prefixes for interdisciplinary courses. The Biology program and prefixes were previously approved, but it is uncertain if they were ever entered into CIM. The Catalog lists BIOL5XX with no course description or permanent number, and Barbari found it odd that these were approved without that information. Myskiw will make a note of it and investigate.

## Continuing Curriculum Items – Request for Council Vote (from 9/16/20)

### 1.1 APPLIED MATHEMATICS and STATISTICS Karin Leiderman

[status: CIM 9/13]

3 program changes: MS-NT in Applied Mathematics and Statistics  
MS in Applied Mathematics and Statistics  
PhD in Applied Mathematics and Statistics

*Removing one of the required courses (Applied Analysis) and changing it to an elective, so they all have 5 required courses. PhD students are required to take an additional 1-hr seminar (new course–MATH588). Leiderman clarified the course is slightly different than a typical seminar and will only be taken once.*

**MOTION:** To approve the AMS programs as presented by Brennecka; seconded by Zimmerman. All in favor. No abstentions. APPROVED.

This will be presented to Faculty Senate for approval at their next meeting.

## Curriculum Items in Progress – Continued Discussion (from 10/7/20, for vote on 11/18)

### 2.1 COMPUTER SCIENCE Dejun Yang

[status: CIM9/23]

1 course change CSCI575: Advanced Machine Learning

*Currently teaching the two Machine Learning courses together as cross-listed sections. They will be separated beginning next year. To make it more clear that they are two distinct ML courses, adding the term “Advanced” to the current CSCI575.*

*Moved from Consent Agenda - needed feedback from CS Department. Registrar recommendation is to follow best practices and create a new course number if content is substantially different.*

Hua Wang joined the meeting to answer questions, as he is the responsible faculty member for this course.

A new Machine Learning course was created at the Undergraduate level and the proposal is to change the title of the existing Graduate level course to “Advanced” Machine Learning to differentiate the two.

Wang confirmed the learning outcomes will be different as the UG version will emphasize tools and practice while the Grad version will delve into more advanced knowledge and active areas of research.

The UG version has been approved but has been taught cross-listed for the past 2 year. CS is now trying to separate the two courses because they are distinct

AMS would like to see a syllabus with learning outcomes for the course so the department can take a closer look.

The two classes, CSCI 475/575 were running concurrently and Myskiw raised concerns

about the inconsistencies that might appear on an academic transcript vs. the course descriptions in the Catalog. Best practice dictates if a course has substantially different content it should be assigned a different course number. Myskiw reiterated that while he offers his recommendations, the decision is ultimately up to the faculty.

## **New Curriculum Items**

### **3.1 NUCLEAR SCIENCE and ENGINEERING**

**Andy Osborne**

[status: CIM 10/5]

1 program change: Minor in Nuclear Materials Processing

*MTGN591 "Physical Phenomena of Coating Processes" has not been offered for years, and likely won't be any time soon. Request to replace MTGN591 with NUGN506 - "The Nuclear Fuel Cycle" in the Nuclear Materials Processing minor.*

Requesting to replace a course that has not been taken by students in a while with another course that is a good fit for the minor.

### **3.2 COMPUTER SCIENCE**

**Dejun Yang**

[status: CIM 10/13]

1 program change: Post-Baccalaureate Professional Computer Science Certificate

*Removed one course from the Post-Bacc Professional CS certificate to align with the credit hour requirements for other post-bacc certificates.*

Removing the 400-level course to align with other Post-Bacc certificates.

Barbari clarified that in best practice, a Post-Bacc implies having a Bachelor's degree, and entrance through the graduate admissions process, but these individuals are taking Undergraduate level courses because they want or need a credential.

## **Consent Agenda**

**The items below did not require additional discussion and have been approved/processed.**

- **Approval of Minutes – October 7, 2020**

**Neal Sullivan**

- **Curriculum Items**

#### **ENGINEERING, DESIGN and SOCIETY**

**Juan Lucena**

[status: CIM 9/17, Provost approved 9/18]

1 new course EDNS515: Introduction to Engineering in Society

*Designed to help drive interest in online graduate certificate and master's programs, provides a crucial foundation for engineers to learn about social science approaches to studying engineering and its inextricable link to society.*

#### **COMPUTER SCIENCE**

**Dejun Yang**

[status: CIM 9/23]

1 course change CSCI565: Distributed Systems

*The original title does not match the course description, since distributed computing systems are for high performance computing and they are only one class of distributed systems. No changes are being made to the course content, only to the title.*

**GEOLOGY and GEOLOGICAL ENGINEERING**

**Danica Roth**

[status: CIM 9/2, Provost approved 9/23]

**2 new courses** GEOL508: Skarns and Related Deposits

*Skarns and Related Deposits has successfully been taught for two semesters as a seminar course GEOL598.*

GEOL504: Uncertainty in Geosciences

*Fully online course focuses on identification, assessment, reduction and communication of uncertainty in geosciences. Part of the online certificate program in Earth Resource Data Science. Designed to align with MSc in Data Science degree co-sponsored by the AMS and CS Departments. Students can use credits from certificate to complete the full MSc degree program.*

**APPLIED MATHEMATICS and STATISTICS**

**Karin Leiderman**

[status: CIM 9/13, Provost approved 9/23]

**1 new course** MATH588: Introduction to Quantitative and Computational Research

*The primary objective of this course is to offer students a formal way to gain skills in reading, critically analyzing, discussing and defending mathematical, computational, and scientific ideas. This course will better prepare first-year graduate students in quantitative and computational fields to conduct research.*

**GEOPHYSICS**

**Ebru Bozdag**

[status: CIM 9/29, Provost approved 9/30]

**1 new course** GPGN559: Reservoir Characterization Seminar

*Course has already been held twice as Special Topics, and must receive approval as a permanent course with its own course number, to be held again.*

**CHEMICAL and BIOLOGICAL ENGINEERING**

**David Marr**

[status: CIM 9/30, Provost approved 9/30]

**1 new course** CBEN522: Chemical Engineering Flow Assurance

*Providing grad students with fundamental and state of the art industry relevant modeling 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".*

**Minor/Administrative Changes to Curriculum**

**The following proposals will appear in the next meeting's (11/4) consent agenda. These items will not be discussed during the meeting unless specifically requested by Council.**

**4.1 GEOLOGY and GEOLOGICAL ENGINEERING**

**Danica Roth**

[status: CIM 10/7]

**1 course change** GEGN580: Applied Remote Sensing for Geoengineering and Geosciences

*Changing format from 2-hour lecture + 3-hour lab to 3-hour lecture. The course supports student learning through lectures and hands-on exercises. Step-by-step instructions for the exercises are available to students, which are carried out with ArcGIS software.*

4.2 **METALLURGICAL and MATERIALS ENGINEERING**

**Geoff Brennecka**

[status: CIM 9/28]

**3 course changes**

MLGN591: Materials Thermodynamics

MLGN592: Advanced Materials Kinetics and Transport

MLGN593: Bonding, Structure, and Crystallography

*Clarifying prerequisite requirements and making them consistent across ML core courses*

**18 course deactivations**

MLGN501: Structure of Materials

MLGN503: Chemical Bonding in Materials

MLGN504: Solid State Thermodynamics

MLGN506: Transport in Solids

MLGN509: Solid State Chemistry

MLGN511: Kinetic Concerns in Materials Processing I

MLGN518: Phase Equilibria in Ceramics Systems

MLGN521: Kinetic Concerns in Materials Processing II

MLGN523: Applied Surface and Solution Chemistry

MLGN526: Gel Science Technology

MLGN552: Inorganic Matrix Composites

MLGN555: Polymer and Complex Fluids Colloquium

MLGN625: Molecular Simulation Methods

MLGN634: Advanced Topics in Thermodynamics

MLGN635: Polymer Reaction Engineering

MLGN648: Condensed Matter II

MLGN673: Structure and Properties of Polymer

MLGN696: Vapor Deposition Processes

*Have not been taught for many years and/or replaced by other courses*

**3 program changes**

MS in Materials Science

MS-NT in Materials Science

PhD in Materials Science

*Clarifying wording and updated program owner info*

Meeting adjourned at 5:05 pm.

Next Meeting: November 4, 2020 | 4:00 – 5:00 pm, via Zoom.