

Colorado School of Mines – GRADUATE COUNCIL MEETING MINUTES
 18 November, 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)	P	Owen Hildreth (ME)
A	Dave Benson (HSE)	P	Karin Leiderman (AMS)	A	Ugur Ozbay (MN)	A	*Hedayat proxy for Gabe Walton (UCT)
P	Ebru Bozdag (GP)	A	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)	A	Gongguo Tang (EE)	P	Jeremy Zimmerman (PH)

Other Regular Attendees and Guests

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

*Ning Wu – Chair of Graduate Affairs, Stephanie Kwon – Assistant Professor (CBE)

Welcome

Neal Sullivan

Briefings and Information Items

• **OGS**

Tim Barbari

- Catalog changes:
 - Admission to the Graduate School
 - Postbaccalaureate and Graduate Certificate

The wording in the catalog for Graduate School admission includes changes to specificity of admission requirements. An example would be changing the number of letters of recommendation from a general number to making this requirement specific to the Graduate program being applied to. These changes have also been applied to the wording in regard to the Graduate Record Examination. Graduate programs will provide specific requirements as to whether or not the GRE will be needed for application and consideration within the program.

The postbaccalaureate and Graduate Certificate catalog changes refer to terminology changes such as: distinguishing between postbaccalaureate and Graduate Certificate requirements, graduation requirements, and catalog wording changes to include the addition of the Graduate Certificate.

Barbari states that these changes to the catalog are not policy changes, but rather edits to concisely identify what is being done in the Graduate programs.

A question is asked regarding language providing direction for graduate students that have changed degree programs, specifically interdisciplinary programs where an advisor to the graduate student might decide to change the degree pathway. The OGS website provides information for graduate students in what students would need in order to withdraw from one program and be admitted into another. A graduate student must formally withdraw from one program or run the risk of being in two simultaneous graduate programs. This; however, will be reviewed as it varies from the catalog changes being discussed and it will be looked at to add to the catalog in the future in a different area.

A second question is asked regarding the situation in which a student meets their current program requirements but not the requirements of the program they are trying to change to. It is discussed

between the Registrar, as the student does not necessarily have to go through the application process a second time. Discussion continues on what would cause a second application process and what may not.

Sullivan goes over the details of the changes to the catalog.

Barbari states that the catalog changes are made to reflect the best practice nationally. Nationally, graduate admission requirements are reflective of the programs' specific needs (GRE, GPA, letters of recommendation, and other requirements needed for a PhD or Master's program). This way the student applying can see what the program deems important to make an admission decision.

Mines' had university-wide descriptive language regarding application and requirements, and some programs would waive additional requirements not needed by the specific program. Now, every program has its own page with its own application requirements. The portal for the applicant also has this information available.

These adjustments are now being made so that the catalog reflects this process.

Discussion continues on if every individual department has defined these requirements and added them to their pages, how this information is being collected, and when these changes are expected to be implemented.

It is then asked that Councilors share the catalog changes to graduate program heads.

- **Registrar**

Paul Myskiw

Spring registration has started, and most Graduate students are expected to have registered on Monday, 11/16. There have been reports of tool issues during registration affecting the display of classes, but this has been sorted out by the Registrar's office.

There is a task being asked of undergraduate as well as graduate programs to have a systematic review of all courses within departments that have requisites and restrictions. If they have not been reviewed or looked at it can cause future issues for students attempting to register for classes.

- **Graduate Student Government**

Maxwell Silver

No Graduate Student Government updates.

Miscellaneous Business/Open Discussion

Neal Sullivan

- Graduate Council Subcommittee Poll Results:
 - 1st – Stipends for Graduate Students
 - 2nd – Adviser/Advisee Procedures and Expectations
 - 3rd – Interdisciplinary Graduate Programs

A poll was sent out to Councilors to identify the Graduate Council Subcommittee that piqued the most interest and would be discussed at this meeting.

Councilors are then split into three Zoom breakout rooms to discuss the big picture question that should be solved by the subcommittee's implementation. Sullivan states that within these breakout rooms,

Councilors should define what the problem is and the Council will move forward with providing solution in the future. Councilors are divided into subcommittee breakout rooms of their choosing, and are given ten minutes to discuss.

The first subcommittee breakout session to return is Adviser/Advisee Procedures and Expectations. Sullivan states that the problem discussed during the breakout session involves the lack of clarity in expectations of the faculty graduate advisor and advisee. There should be clear, written expectations not provided by the university, but rather the individual advisor and advisee relationship. The big question defined by the subcommittee is:

1. How are clear, written expectations defined for the advisor and advisee in the graduate program?

The second subcommittee to return from the breakout sessions is Interdisciplinary Graduate Programs. Zimmerman states that councilors brought up if all interdisciplinary programs are represented on the Graduate Council, and if additional programs can be incorporated. The larger question provided by the subcommittee discussion is the concern for interdisciplinary program resources. The big question defined by the subcommittee is:

2. Are all interdisciplinary programs being represented on Graduate Council, and are interdisciplinary programs receiving the resources they need to function?

Discussion begins on monetary resources of interdisciplinary programs as well as issues encountered regarding TA support for programs, who is receiving teaching credit, who is paying for compensation, and who is being compensated.

The third and final subcommittee to return from breakout sessions is Stipends for Graduate Students. Multiple questions arose within the stipend discussion. These questions involved equity across all departments and programs, how the university would get to that stipend equity, moving toward multi-year commitments similar to peer institutions with four to five-year funding commitments with PhD students, and how Mines' stipend levels compare to competing institutions. The big question defined by the subcommittee is:

3. Should there be equity across all departments and programs and will this be a multi-year implementation that compares to competing institutions?

A question was brought up regarding summer funding for graduate students to which it is clarified that with standardized stipends it is seen through a twelve-month basis so this would include summer payment. The summer funding, if not an RA or TA, could be considered a fellowship. This fellowship can then come from incentive or revenue sharing from non-thesis Master's programs.

Curriculum Items – Request for Council Vote (from 11/04/20)

1.1 COMPUTER SCIENCE

Dejun Yang

[status: CIM 9/23]

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 clearer that they are two distinct ML

courses, adding the term "Advanced" to the current CSCI575. Syllabus has been added to CIM.

UG version is the new course (but has been taught cross-listed), Grad version stays the same but with "Advanced" added to title. Registrar recommendation is to follow best practices and create a new course number if content is substantially different.

MOTION: To approve one course change to the Advance Machine Learning by Brenneka; seconded by Zimmerman. No abstentions. APPROVED.

1.2 **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.

MOTION: To approve one program change to the Minor in Nuclear Materials Processing by Brenneka; seconded by Hildreth. No abstentions. APPROVED.

1.3 **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.

MOTION: To approve one program change to the Post-Baccalaureate Professional Computer Science Certificate by Brenneka; seconded by Hildreth. No abstentions. APPROVED.

Continuing Curriculum Items – Continued Discussion (for vote 12/02)

2.1 **GEOLOGY and GEOLOGICAL ENGINEERING**

Danica Roth

[status: CIM 10/03]

3 program changes: GIS & Geoinformatics Certificate: Geohazards Evaluation

GIS & Geoinformatics Certificate: Environmental Studies

GIS & Geoinformatics Certificate: Natural Resources Assessment

Reduced required courses from two to one and moved one of the two required courses as an elective. Changed effective catalog date to 2021-2022

No discussion regarding the three program changes to the Geology and Geological Engineering certificates.

New Curriculum Items

Marr states that the Chemical and Biological Engineering department will also be implementing the ability to double-count two courses at the 400-level. The Chemical and Biological Engineering department had not allowed double-counting in their catalog, and are moving forward with implementing it.

3.1 **CHEMICAL and BIOLOGICAL ENGINEERING**

David Marr

[status: CIM 11/08, Provost approved: 11/09]

1 new course: CBEN530: Transport Phenomenon

This course seeks to advance the Mines@150 mission by expanding graduate education in Chemical Engineering to undergraduate students with degrees in other disciplines.

This course was created to provide additional flexibility to graduate students outside of the PhD program. The previous class, Advanced Transport Phenomenon, is taught at a PhD level. There is also a CBEN430 course, which teaches the concepts at an undergraduate level.

The idea is to allow students to take the 530-level course, which would have an additional project and oral presentation.

It is mentioned that CBEN530 may be similar to a course offered with Chemical Engineering, and a question is asked if this has been discussed with the Chemical Engineering department. The course is stated to be very different and will be geared toward the Chemical and Biological Engineering students, exclusively.

3.2 CHEMICAL and BIOLOGICAL ENGINEERING

David Marr

[status: CIM 11/09, Provost approved: 11/10]

1 new course: CBEN519: Advanced Topics in Heterogenous Catalysis

This course will provide undergraduate and graduate students with fundamental industry relevant modeling and experiment experience and application. It will contribute to the “professionally oriented postgraduate education” and strengthen the “affinity for Mines among our students, alumni, and external partners”.

This will provide an option to the reaction kinetic and catalysis course. This will be taught by Stephanie Kwon and Diego Gomez-Gualdron.

A question arose regarding the Advanced Topics in Heterogenous Catalysis course and the similarity of the course available with the Chemistry department. Marr informs that this similarity is going to be discussed with Brian Trewyn. Discussion will also go on offline between departments to discuss the course.

The course is designed to be complimentary to the one taught in the Chemistry department, but will involve computational chemistry.

Wu states that this course has not been taught before but will be receiving a catalog number because it will be a required course for the Master’s students.

Discussion continues, and the syllabus of CBEN519 is shown to the councilors for additional information on the course.

3.3 CHEMICAL and BIOLOGICAL ENGINEERING

David Marr

[status: CIM 11/09]

1 course change: MSPHD-CBE: MS & PhD – Chemical and Biological Engineering

As the size of the MS program increases and educational (undergraduate) backgrounds grow more diverse, this will provide options for the MS core separate from the PhD requirements. Additional options have been added to the core course requirements for the MS degree.

This course change is created to bring focus to the non-thesis master’s students, as the program primarily focused on PhD students in the past. It will be providing students in the non-thesis master’s

program with flexibility through the four major courses.

Adjourn

Neal Sullivan

MOTION: To adjourn the 11/18 Graduate Council meeting by Brennecka; seconded by Zimmerman. No abstentions. APPROVED.

Consent Agenda

The following proposals will not be discussed unless specifically requested by Council. With no objections, approval is implied and items will be processed accordingly.

- **Approval of Minutes** – November 4, 2020
- **Curriculum Items**

Neal Sullivan

CHEMICAL & BIOLOGICAL ENGINEERING

David Marr

[status: CIM 11/08, Provost approved: 11/10]

1 program change: CBEN516: Advanced Transport Phenomenon

Course name changed from "Transport Phenomenon" to Advanced Transport Phenomenon in order to distinguish between CBEN516 and CBEN530. No changes to course content or requirements were made.

CHEMISTRY

Christine Morrison

[status: CIM 11/12]

2 program changes: MPMSPHD-CH: MP, MS & PhD

Formalized catalog changes to reflect program change grade minimum (passing grade is B or better). This has already been done in the program.

Additional change: removing "field of research" information. This was better suited in the "Overview" tab and information provided was out-of-date.

Meeting adjourned at 5:08 pm.

Next Meeting: 2 December, 4:00 – 5:00 pm, via Zoom.