

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

Attendees:

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

P	Neal Sullivan (Chair)	A	Amy Hitchner (LB)	P	Andy Osborne (NSE)	P	Owen Hildreth (ME)
P	Dave Benson (HSE)	P	Karin Leiderman (AMS)	P	Gabe Walton (UCT)	P	Ebru Bozdog (GP)
P	Juan Lucena (EDS)	P	Jim Ranville (GC)	A	Zhenzhen Yu (MME)	P	Geoff Brennecka (ML & MT)
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) proxy for Gabe Walton (UCT)
P	Christine Morrison (CH)	P	Gongguo Tang (EE)	P	Jeremy Zimmerman (PH)	P	Jamal Rostami (MN)

Other Regular Attendees and Guests

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

*Angel Abbud-Madrid (MN)

Welcome

Neal Sullivan

Briefings and Information Items

Office of Graduate Studies

Tim Barbari

Catalog Change – Non-degree Credit Limits

Barbari reports that, previously, Mines did not have limitations on the number of credits a non-degree seeking student can apply towards a graduate degree. This Catalog change outlines a limitation of no more than three credits applied to a post-baccalaureate or graduate certificate, and no more than nine credits applied to a master's or doctoral degree.

A question is asked regarding the motivation for this change. Barbari responds that this change will prevent a situation in which a student takes three credits for a master's degree, struggled through these three credits, and creates an obligation for the program to admit the student and graduate them.

A question is asked on the grades applied to these non-degree seeking students. The grades received by a non-degree seeking student are not considered transfer credits as they are a part of the Mines transcripts. Language within the Catalog assures that these grades count toward the overall GPA if a non-degree seeking student chooses to be subsequently admitted into a certificate or graduate degree program.

Catalog Change – Academic Probation and Allowance for Part-Time Students

There have been edits to language and the addition of a qualifying statement that addresses Probation and Discretionary Dismissal Process and Procedure as including full-time enrollment.

This change has been made in order to provide the Dean with the ability to discern academic standing for part-time or online students evaluate in terms of credit equivalent.

Barbari reports the system as flagging students that are taking the one, three-credit course in a semester and receiving a B- on academic probation. This language provides the Dean with the ability to

view the entirety of a students' semesters and not initiate the process of probation until enough credits are involved to make a more educated system.

Additionally, the current Catalog states that students having a second semester of probation will retain the academic probation for the remainder of their academic career. This does not exist within the undergraduate level and Barbari is unaware of other institutions implementing this. The language now reflects probation notation through the duration of a students' remedial plan and its removal once that plan is successful.

This information will be available on the Catalog. When a part-time graduate student falls below the standard, the student will see this probation on their transcript but the regular process of probation dismissal will not occur until there is a reasonable amount of credits for the Dean to decide.

A question is asked regarding students with a pattern of unsatisfactory work within a program; Barbari states that if a repeated pattern is observed by the department the Dean should be contacted to move forward on addressing this behavior with the student in question.

Catalog Change – Combined Undergraduate/Graduate Program Definition

Barbari explains the intent of the combined program as having a period of overlap between the undergraduate and graduate degrees to assure proper advising takes place in which the double-counting of six credits are being taken advantage of. These six credits must be part of the degree program that a student is seeking a dual degree with.

With this language on combined program requirements, a sentence has also been added to clarify students enrolled in the combine undergraduate/graduate degree program as students with uninterrupted registration from the time a student earns an undergraduate degree to the time the student begins a Mines graduate degree.

Registrar's Office

Paul Myskiw

500-Level form and policies

Myskiw continues alongside Dean Barbari's combined undergraduate/graduate degree program with the introduction new language for undergraduate students taking 500-level courses.

Myskiw reports around 200 undergraduate students per semester taking 500-level courses. Each student is required to fill out a two-page document which has caused confusion or has been filled out incorrectly. To circumvent this issue, clarifying language on double-counting is being added to the Catalog.

Federal Financial Aid requires that classes that are to be covered by Federal Financial Aid must be prescribed within the Catalog as part of a student's program of study. The language included in the Catalog change will address undergraduate students taking 500-level courses as counting toward their undergraduate degree progress rather than an exception.

This will then allow students to take and register for these 500-level courses without filling out the two-page form initially required.

A question is asked regarding the definition of an undergraduate senior being allowed to take 500-level courses; Myskiw states that undergraduates are identified as seniors once 90 credits have been

completed. Around six undergraduate students a year are provided permission to take a 500-level course. This language will remain within the Catalog.

An additional question is asked regarding students that wished to be dual enrolled but could not due to financial aid; Myskiw responds that a dual enrolled student can be covered under undergraduate federal aid. The benefit of the dual degree provides students with the opportunity to retain a full-ride scholarship and complete their program within five years.

The Mines@150 goal is to encourage students into the master's non-thesis provided by Mines, and the hope of this Catalog language is to encourage a large pipeline of seniors to move through this dual-degree process.

Graduate Student Government

Maxwell Silver

Silver begins by providing feedback from GSG on the Advisor/Advisee guidelines document that has been drafted by Council, this document was not shared with GSG and only discussed.

GSG strongly supports the creation and implementation of the document and are pleased with being a part of the advisor conversation.

Silver brings an idea from GSG to provide an insurance policy to cover one semester of stipend tuition for graduate students in order to allow the student to change advisors. The student can then contact OGS or contacts outside of the department to have this one semester covered; this prevents students from looking to an outside job as they seek out a new advisor.

Curriculum Items – Request for Council Vote (from 1/20/21)

1.1 MECHANICAL ENGINEERING

[status: CIM 1/7 & 1/17]

4 program changes: CERTMSPHD-SPACE: CERT, MS, & PhD – Space Resources

*Program updates include the addition of clarification about the PhD program including process and expectations for the Qualifying Exams, Dissertation Research Proposals and Defense and Required number of Publications and Presentations. Addition of new courses to the SPRS Elective list. Text updates throughout for clarification. **Championed by Angel Abbud-Madrid.***

MOTION: To approve the program change to the CERT, MS, & PhD in Space Resources as championed by Angel Abbud-Madrid by Brennecka, seconded by Morrison. No abstentions. APPROVED.

CERTMS-ADVMAN: CERT & MS – Advanced Manufacturing

*Changes to language in Graduate Certificate in Additive Manufacturing, changes to core requirements of Additive Manufacturing, changes to language in Masters of Science in Advanced Manufacturing (non-thesis), added selection on electives, language changes to Mines' Combined Undergraduate/Graduate Degree program and electives. **Championed by Craig Brice.***

MOTION: To approve the program change to the CERT & MS in Advanced Manufacturing as championed by Craig Brice by Brennecka, seconded by Morrison. No abstentions. APPROVED.

XCR-ADVMO: Graduate Certificate – Smart Manufacturing

Language change. Course change: EBG576 (removed), addition of ELECT → allow students to

This course was previously offered as an SPRS Special Topics Course.

SPRS506: International Space Law & Policy Angel Abbud-Madrid

This online course will prepare students in this program to evaluate the legal and policy reasoning, as well as ethical considerations underlying the past, present, and future uses of space for civil, military and commercial development, particularly space resource utilization. This course will be delivered online.

This course was previously offered as an SPRS Special Topics Course.

[status: CIM 1/7; Provost: 1/8] Owen Hildreth

MEGN651: Advanced Computational Fluid Dynamics

This course covers fundamentals of computational fluid dynamics for stimulating unsteady incompressible fluid flows, including heat and mass transport. The course is modeled on similar courses offered at most top research institutions, but lacked at Mines. Course will expand offerings at Mines and will grow the scale and impact of ME research.

MOTION: To approve the 6 new courses AMFG523, AMFG581, AMFG592, SPRS505, SPRS506 and MEGN651 by Brennecka, seconded by Morrison. No abstentions. APPROVED.

1.2 **MATERIALS SCIENCE** Geoff Brennecka

[status: CIM 1/15]

1 course change: MLGN517: Theory of Elasticity

Cross-listed with MEGN510; changes made to maintain consistency. No other changes.

MOTION: To approve the 1 course change to MLGN517: Theory of Elasticity by Brennecka, seconded by Zimmerman. No abstentions. APPROVED.

1.3 **ECONOMICS and BUSINESS** Tulay Flamand

[status: CIM 1/18]

1 program change: MS-ETM-NT: Engineering and Technology Management (ETM) Master of Science

Deletion of electives: EBGN 515, 567, 573, 5XX from "Technology Management and Innovation" list. These courses have not been offered in about 5 years. Added EBGN 578 to this list.

MOTION: To approve the 1 program change to the Engineering and Technology Management (ETM) Master of Science as championed by Tulay Flamand by Brennecka, seconded by Morrison. No abstentions. APPROVED.

1 new course: EBG544: Innovate X

Innov8x fills an entrepreneurship and innovation gap in our curricula in the area of problem definition: the investigation and framing of a wicked problem in the context of ambiguity, uncertainty, and complexity and hands-on, and the iterative process of solving problems creatively. The course provides professionally oriented pre- and post-graduate education options and is already attracting new students to Mines.

MOTION: To approve the 1 new course EBG544: Innovate X by NAME, seconded by NAME. No abstentions. APPROVED.

1.4 **ELECTRICAL ENGINEERING**

Dorothy Cheng

[status: CIM 1/13]

1 program change: MSCR-SEPS: Smart-Grid, Power Electronics, and Electrical Power Systems

Language changes, no substantive changes to the program itself.

MOTION: To approve the 1 program change to Smart-Grid, Power Electronics, and Electrical Power Systems as championed by Dorothy Cheng by Brennecka, seconded by Morrison. No abstentions.

APPROVED.

1.5 **APPLIED MATHEMATICS and STATISTICS**

Karin Leiderman

[status: CIM 1/14]

1 program change: MSPHD-AMS: MS & PhD – Applied Math/Statistics

*Change to required coursework and language within the program. Courses changed: **Specialty in Computational & Applied Mathematics**; MATH501 (removed), **Specialty In Statistics**; MATH530 (removed), MATH560 (added), **Specialty in Computational & Applied Mathematics**; MATH501 (removed), MATH588 (added), **Specialty in Statistics**; MATH530 (removed), MATH 560 and 588 (added).*

MOTION: To approve the 1 program change to the MS & PhD in Applied Math/Statistics as championed by Karin Leiderman by Brennecka, seconded by Zimmerman. No abstentions. APPROVED.

1 course change: MATH531: Theory of Linear Models

Course name changed from "Statistical Methods II" to Theory of Linear Models.

Over time, the content of MATH531 has become less focused on preparing graduate statistics students and more as a 500-level version of MATH424. The material in this course will be taught in a more mathematical perspective. Change in prerequisites, course description changed to reflect changes.

MOTION: To approve the 1 course change to MATH531: Theory of Linear Models by Brennecka, seconded by Zimmerman. No abstentions. APPROVED.

1.6 **CIVIL and ENVIRONMENTAL ENGINEERING**

Reza Hedayat

[status: CIM 1/12 & 1/13]

2 program changes: MSPHD-CEE: MS & PhD – Civil Eng & Environmental Eng

*Language clarification, addition and removal to core courses in **Structural Engineering**: CEEN543 (removed), CEEN545 (added), CEEN533 (added).*

MOTION: To approve the 1 program change to the MS & PhD in Civil Eng & Environmental Eng as championed by Reza Hedayat by Brennecka, seconded by Morrison. No abstentions. APPROVED.

XCR-ENVMOD: Graduate Certificate in Environmental Modeling
Number of course credits changed from 12 to 9. The elective course is eliminated to reduce the required number of courses needed for the certificate program to make it more appealing, accessible, and affordable with better student retention for the timely completion of the certificate program in one year.

MOTION: To approve the 1 program change to the Graduate Certificate in Environmental Modeling as championed by Reza Hedayat by Brenneka, seconded by Morrison. No abstentions. APPROVED.

1 course change: CEEN595: Analysis of Environmental Impact
Course description change; more than 30% of description changed in order to reflect nature of the course; no other changes made.

MOTION: To approve the 1 course change to CEEN595: Analysis of Environmental Impact by Brenneka, seconded by Morrison. No abstentions. APPROVED.

1.7 QUANTITATIVE BIOSCIENCES and ENGINEERING

Karin Leiderman

[status: CIM 1/16; Provost: 1/17]

3 new courses: BIOL500: Cell Biology and Biochemistry

This course will provide students with deep biological insight as well as hands-on experience of studying a biological question at the level of the cell. Meanwhile discussions on launching a new interdisciplinary undergraduate biological engineering program are ongoing on campus. As a core course for these two programs, this Cell Biology and Biochemistry course is necessary to be offered as a regular course in every academic year.

This course has been previously offered as a BIOL and CHGN special topics course.

BIOL510: Bioinformatics

This course will be mainly delivered by lectures. Because of the interdisciplinary nature of the course, the backgrounds of the students to take course will be very diverse. Therefore, face-to-face interactions are of significant importance to timely address various students' needs so as to successfully deliver knowledge to the students.

This course will be cross listed with CSCI578 which is an existing course within the Catalog.

BIOL520: Systems Biology

This course provides students as introduction to the emerging field of systems biology. It will consist of lectures, group discussion sessions, and problem-solving sessions and/or computational labs. Meanwhile discussions on launching a new interdisciplinary undergraduate biological engineering program are ongoing on campus. As a core course for these two programs, this Systems Biology course is necessary to be offered as a regular course in every academic year.

This course has previously been offered as a MATH special topics course.

MOTION: To approve the 3 new courses BIOL500, BIOL510 and BIOL520 by Brenneka, seconded by Hildreth. No abstentions. APPROVED.

No Continuing Curriculum Items

New Curriculum Items

2.1 GEOPHYSICS

Ebru Bozdog

[status: CIM 2/17; Provost: 2/17]

1 new course: GPGN583x: Reading Seminar

This course was formed as a part of revised Geophysics MS programs, including thesis-based and non-thesis MS. The objective is to introduce MS students to a wide range of topics in geophysics and problems of scientific and societal importance in which geophysics plays an important role.

Bozdag states the reading seminar course as related to the weekly seminar series of highlight lectures hosted by the Geophysics department. This course will encourage students to read papers relevant to the highlight lecture of the week and prepare a report.

The goal is to provide students with a knowledge of a wide range of topics rather than focusing on their own research. This will be a one credit course and students should only take it one time.

The “x” at the end of the GPGN583x course will be removed; there was a CIM conflict with a geophysics course that is no longer offered but had not been properly deactivated and archived within the system.

This has been removed in the current CIM submission.

Adjourn

Meeting adjourned at 5:02pm.

Next Meeting: March 3, 4:00 – 5:00 pm, via Zoom.

Neal Sullivan

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** – February 3, 2021

Neal Sullivan