

Colorado School of Mines – UNDERGRADUATE COUNCIL MEETING MINUTES  
 October 12, 4:00 – 5:00 pm, via Zoom

**Attendees:**

**Voting Members:** 18 total (10 needed for quorum). Quorum was present.

P	Brandon Dugan (chair)	P	Andrew Pederson (EB)	P	Mike Nicholas (AMS)	P	Chuck Stone (PH)
P	Michael Barankin (CBE)	P	*Shannon Mancus (HASS) proxy for Cortney Holles (HASS)	A	Corinne Packard (MME)	P	Nicole Smith (MN)
P	*Christine Morrison (CH) proxy for Dylan Domaille (CH)	P	Ge Jin (GP)	P	Rob Thompson (CS)	A	Bruce Trudgill (GE)
P	Linda Battalora (PE)	P	Hongyan Liu (CEE)	P	Oyvind Nilsen (ME)	P	Emmelia Ashton (USG)
P	Chelsea Salinas (EDS)	P	Brianna Buljung (LB)				

**Other Regular Attendees and Guests**

P	Angela Dunn (Mines Online)	P	Dixie Cirillo (PA)	P	Mara Green (AA)	A	Kendra Stansbury (RO)
A	Karla Perez-Velez (CASA)	P	Vibhuti Dave (UGS)	P	Deb Jordan (Trefny Center)	P	Paul Myskiw (RO)
P	Katie Ludwin (CASA)	A	Danielle Boileau (CASA)	A	Cheryl Medford (GE)	A	Rachel McDonald (PE)
A	Sam Spiegel (Mines Online)	P	D. Scott Heath (RO)				

**Special Guest(s):** Linda Figueroa (CEE), Brian Gorman (MME)

**Welcome**

Brandon Dugan

Executive/steering committee has been established. Members consist of:

- Michael Barankin,
- Chuck Stone,
- Cortney Holles, and
- Brandon Dugan.

**Approval of Minutes – September 28, 2022**

Brandon Dugan

**MOTION:** To approve the September 28, 2022 Undergraduate Council minutes by Smith, seconded by Nilsen. Motion passed unanimously.

**Briefings and Information Items**

Office of Undergraduate Studies

Vibhuti Dave

No updates from the Office of Undergraduate Studies.

Registrar's Office

Paul Myskiw

The Spring 2023 schedule will be available for viewing 10/24. Spring 2023 registration begins 11/14.

**Core Curriculum**

Faculty Senate had decided to provide conditional approval of the presented core curriculum resolution based upon the events at Undergraduate Council. Resolution includes timelines, stakeholder

involvement, and decisions. All final changes to courses and programs will come through Undergraduate Council for more detailed discussion and vote. Senate acknowledged Council's departmental representation and feedback.

CH discussed resolution and core curriculum at consecutive department meetings and noted biggest concern with loss of free electives leading to students' loss of flexibility and ability to transfer AP credits. Horan noted free electives were not removed from the core but provides three electives to departments. Horan also noted peer institutions do not place free electives within the core.

Comment raised on gaining feedback from undergraduate students and how it would impact them. SL expected to present core revision to USG. Pederson and Dugan asked for informal feedback from students in class.

Suggestion made to not vote on each part of the resolution separately. Senate and Council will be able to differentiate as proposals and changes come through, resolution is to provide the framework and not finalized curriculum.

The core cannot be increased in order to remain competitive as an institution.

AA, departments, and stakeholders are asked to provide plans for the core curriculum framework regarding resources. The process of revising the core has begun, departments are assessing curriculum for major changes. AA and DHs discussing mechanics and potential issues. Council and Senate are in a position to listen and evaluate proposals being put forward based on the resolution presented.

Note made that the details of the new computing course and CASES were beyond the scope of the Core Curriculum committee; departments are asked to participate and engage in the CASES development.

- **Question** on who will be in charge of delegating CASES moving forward; CASES as a proposal will come through Council and Senate, the course is fundamentally interdisciplinary with involvement from multiple departments. CASES would be a collaboration between HASS, EB, and EDS. The resolution presented will call for piloting CASES, not for full implementation of CASES within the core.

Concern raised on removing EBG201 from the core without knowing the details of CASES. Horan reiterated that EBG201 would not be removed from the core until CASES had been successfully piloted. If CASES should not meet the learning objectives of EB, EBG201 would not be removed from the core.

Comment made on Pathways and electives; committee saw Pathways as a means for greater involvement in electives and organic development for interdisciplinary collaboration. Requirements in the past had caused issues in graduation time, Pathways would not be mandated but encouraged for students.

**MOTION:** To endorse the proposed core curriculum resolution by Jin, seconded by Nilsen. 9 for, 4 against, 3 abstentions.

**Curriculum Item(s) for Council Vote** – from 8/24/22

1.1 **ENGINEERING, DESIGN, AND SOCIETY** Chelsea Salinas  
[CIM 8/24]  
**1 program change:** BS-EGN: BS in Design Engineering  
*Our undergrad committee reviewed our focus area listings and requirements. We propose the updated changes to streamline curriculum for our students that aligns with consistent course delivery. The proposed focus area course changes also provide a more curated group of courses meeting the needs of our students within their chosen focus area themed pathway. We continue to offer breadth in focus area course offerings with a strong focus on our design core and pedagogy critical to our success as a department and in line with the goals of team-work, innovation and growth through Mines@150. Our Dept. Head, Dean Nieusma, has been in conversations with the Provost regarding a program name change from BS in Engineering to BS in Design Engineering. We have been given the green light from upper administration to pursue this name change.*

1.1.1 **5 course changes:** EDNS151: CORNERSTONE DESIGN  
EDNS155: CORNERSTONE DESIGN I: GRAPHICS  
EDNS251: CORNERSTONE DESIGN II  
EDNS491: CAPSTONE DESIGN I  
EDNS491: CAPSTONE DESIGN II  
*We are wanting to update course name to better align with course association around campus. Furthermore, upper administration has requested this course name change for alignment with Mines@150 initiatives in innovation, entrepreneurship, and design.*

**1 new course:** EDNS325: CULTURAL ANTHROPOLOGY

**MOTION:** To approve the curriculum items presented in item 1.1 and 1.1.1 by Barankin, seconded by Nilsen. Motion passed unanimously.

1.2 **HUMANITIES, ARTS, AND SOCIAL SCIENCES** Chelsea Salinas  
[CIM 9/7]  
**1 course deactivation:** HASS325: CULTURAL ANTHROPOLOGY

**MOTION:** To approve course deactivation of HASS325: Cultural Anthropology by Barankin, seconded by Nilsen. Motion passed unanimously.

1.3 **CSM GENERAL** Corinne Packard  
[CIM 9/7]  
**1 program change:** MIN-QUE: Minor in Quantum Engineering  
*Catalog had displayed incorrect course names in description, a deadlink, and duplicate courses. Request made through ITS Help Center, redirected to UGC.*

**MOTION:** To approve the program change to MIN-QUE: Minor in Quantum Engineering by Barankin, seconded by Jin. Motion passed unanimously.

New Curriculum Item(s)

2.1 **CHEMISTRY** Christine Morrison  
[CIM 9/28]  
**1 program change:** BS-CHM: BS in Chemistry  
*These changes include: fixing course numbers (replacing instances of CHGN4XX with proper course numbers), adding CHGN409 to CHGN elective list, adjusting some courses in fall and senior year of B.S. in Biochem degree to reflect degree flowchart on department website.*

2.2 **ENGINEERING, DESIGN, AND SOCIETY** Chelsea Salinas  
[CIM 9/27; Provost 9/27]  
**1 new course:** EDNS444: INNOV8X  
*Transfer of EBGN 444 to EDNS 444. Change in course prefix as responsible faculty and course lead has changed locus of appointment from EB to EDS. CLLOs and course delivery will not change.*

Saleh changed locus of appointment from EB to EDS. Graduate level course has been presented to Graduate Council.

2.3 **GEOLOGY AND GEOLOGICAL ENGINEERING** Cheryl Medford  
[CIM 9/26]  
**1 course change:** GEGN466: GROUNDWATER ENGINEERING  
2.3.1 **1 course deactivation:** GEGN467: GROUNDWATER ENGINEERING  
*The only change being requested here is a course renumbering. Dr. Singha has had a long-standing issue (from before my time) with course numbers that is about to come to a head.*  
*The Higher Learning Commission suggests that 400-level courses that graduate students should be 500-level and show additional work to be considered for graduate credit. GEGN 466 (Groundwater Hydrology) has been used as a catch-all for graduate students and undergraduates not majoring in GE, whereas the GE undergraduate students take GEGN 467--the same class, but with a lab. Because Dr. Singha will likely need to develop a 566 next year for graduate students to satisfy HLC requirements, it would be much easier if I just had 466 (lecture; 3 credits) and 466L (lab; 1 credit) where students could sign up for either/both, and remove GEGN 467 altogether--thus meaning Dr. Singha still only has two course numbers to manage rather than three. This change is to make GEGN 466 a 3+1 credit class, similar to CEEN 312.*

2.4 **APPLIED MATHEMATICS AND STATISTICS** Mike Nicholas  
[CIM 10/6]  
**1 course change:** MATH440: PARALLEL SCIENTIFIC COMPUTING  
*Update to course description to reflect that the professor who used to teach this course has retired.*

Both graduate and undergraduate-level cross-listings were updated to reflect changes in teaching.

**Continuing Curriculum Item(s)** – from 9/28/22

3.1 **METALLURGICAL AND MATERIALS ENGINEERING** Corinne Packard

[CIM 9/20; Provost 9/20]

**1 new program:** BS-CERE: Ceramic Engineering

Gorman presented on the new undergraduate Bachelor of Science in Ceramic Engineering for MME. Gorman provided a SWOT analysis of the strengths, weakness, and opportunities of the degree. Strengths include Mines' international recognized MME degree, faculty with ceramic expertise, local industry support, and utilization of currently available MME resources for the new degree. Weaknesses include requirement of small, additional equipment to implement lab courses. New CerE degree would be one of three in the United States.

- **Question** if CoorsTek is involved with the CerE program or if outside resources are needed; Gorman noted resources needed include small pieces of equipment for undergraduate labs. CoorsTek is very supportive, not involved in details of the program; would take interns and employees.
- **Question** if the library would need to purchase new subscriptions, databases, or books; Gorman noted library has a variety of books covering ceramics, journals are covered.

Note made that MATH348 is no longer offered and listed in the electives; course has been removed from new CerE electives list and MME degree electives list.

3.1.1 [CIM 9/19; Provost 9/20]

**9 new courses:** MTGN310: POWDER PROCESSING AND FORMING  
MTGN310L: POWDER PROCESSING AND FORMING LABORATORY  
MTGN319: INTRODUCTION TO GLASS SCIENCE AND TECHNOLOGY  
MTGN319L: INTRODUCTION TO GLASS SCIENCE AND TECHNOLOGY LABORATORY  
MTGN345: SINTERING OF CERAMICS  
MTGN345L: SINTERING OF CERAMICS LABORATORY  
MTGN465L: MECHANICAL PROPERTIES OF CERAMICS AND COMPOSITES LABORATORY  
MTGN410: THERMAL PROPERTIES OF CERAMICS  
MTGN465L: MECHANICAL PROPERTIES OF CERAMICS AND COMPOSITES LABORATORY

3.1.2 **1 course change:** MTGN465: MECHANICAL PROPERTIES OF CERAMICS  
*A 1-credit laboratory course will be a required co-requisite to support the proposed Ceramics Engineering BS degree program. No other changes will be made. This course has run as lecture-only elective for many years, but will now be a required course for the CerEng degree and can be used as an elective for the MME degree.*

3.1.3 [CIM 9/19]

**1 program change:** BS-MME: BS in Metallurgical and Materials Engineering  
*Pending approval of the newly proposed Ceramic Engineering BS degree, we plan to replace the MME BS degree course requirements: MTGN314/MTGN314L Properties & Processing of Ceramics with MTGN310/MTGN310L Power Processing & Forming. There*

*is no change in the number of credit hours. The new course will address powder processing and forming relevant to ceramics, powder metallurgy, and additive manufacturing, providing students with a cross-cutting education. Both the MME BS and CerEng BS will share MTGN310/310L as a required course. Students interested more specifically in ceramics can take further classes as electives or pursue the CerEng degree.*

3.2 **APPLIED MATHEMATICS & STATISTICS**  
[CIM 9/20]

Mike Nicholas

**1 program change:** BS-AMS: BS in Applied Mathematics and Statistics  
*With the new CS structure, we would like to require CSCI101, CS200, and an additional CS elective. We would like to remove CSCI403 (databases) as a required course for the statistics degree. We will instead require MATH436 (advanced stats) and will move CSCI403 to the stat elective list. The statistics faculty feel that MATH436 is too essential to not require it of all stats majors.*

3.2.1 [CIM 9/19]

**4 course changes:** MATH432: SPATIAL STATISTICS  
*Fall only semester offering, previously Fall and Spring.*  
MATH436: ADVANCED STATISTICAL MODELING  
*Semester offered changed to Fall from Spring and Fall in order to place course before the capstone to create a modeling sequence:*  
*MATH310 → MATH424 → MATH436 → MATH482.*  
MATH437: MULTIVARIATE ANALYSIS  
*Spring only semester offering, previously Fall and Spring.*  
MATH482: STATISTICS PRACTICUM (CAPSTONE)  
*Added MATH436 prerequisite to form a modeling sequence:*  
*MATH310 → MATH424 → MATH436 → MATH482. MATH482 is stats capstone course and students will do more meaningful projects if they have MATH436 first.*

3.3 **CHEMICAL AND BIOLOGICAL ENGINEERING**  
[CIM 9/13]

Michael Barankin

**1 program change:** BS-CHE: BS in Chemical Engineering  
*Updates made to the electives list.*

3.4 **HUMANITIES, ARTS, AND SOCIAL SCIENCES**  
[CIM 9/20; Provost 9/20]

Cortney Holles

**1 new course:** HASS111: NATURE AND HUMAN VALUES SHORT FORM

3.5 **QUANTITATIVE BIOSCIENCES AND ENGINEERING**  
[CIM 9/22; Provost 9/22]

Justin Shaffer

**1 new course:** BIOL415: QUANTITATIVE BIOSCIENCES AND ENGINEERING FIELD SESSION

**Adjourn**

Brandon Dugan

Meeting adjourned: 4:28 pm.

Next meeting: October 26, 4:00-5:00 pm via Zoom. Please send agenda items to Mara Green ([mgreen1@mines.edu](mailto:mgreen1@mines.edu)) one week prior.