

Colorado School of Mines – UNDERGRADUATE COUNCIL MINUTES
 May 11, 4:00-5:00 pm via Zoom

Attendees:

Voting Members: 19 total (11 - majority needed for quorum). Quorum was present

P	Jeff King (chair)	P	Andrew Pederson (EB)	P	Mike Nicholas (AMS)	A	Mona El Helbawy (EE)
P	Michael Barankin (CBE)	A	Jay Straker (HASS)	A	Corinne Packard (MME)	P	Nicole Smith (MN)
P	Dylan Domaille (CH)	P	Ge Jin (GP)	P	Jeff Paone (CS)	P	Bruce Trudgill (GE)
P	Linda Battalora (PE)	P	Hongyan Liu (CEE)	P	Oyvind Nilsen (ME)	A	Ethan Lewellin (USG)
A	Gyasi Evans (LB)	P	Chelsea Salinas (EDS)	A	Tim Ohno (PH)		

Other Regular Attendees and Guests

A	Fran Aguilar (MS)	A	Dixie Cirillo (PA)	A	Jennie Kenney (AA)	A	Kendra Stansbury (RO)
A	Karla Perez-Velez (CASA)	P	Vibhuti Dave (UGS)	P	Mara Green (AA)	P	Paul Myskiw (RO)
P	Deb Jordan (Trefny)	A	Josh Ramey (QBE)	A	Cheryl Medford (GE)	A	Terri Snyder (PE)
P	Katie Ludwin (CASA)						

Special Guest(s):

Welcome

Jeff King

King welcomed Councilors to the last meeting; Councilors informed King had been elected as Faculty Senate President for 2022-2023. A new chair will be asked to volunteer.

Approval of Minutes – April 13, 2022

Jeff King

MOTION: To approve the Undergraduate Council minutes of April 13, 2022 by Battalora, 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

Myskiw reminded Councilors that grades are due Monday, 5/16.

Curriculum Item(s) for Vote – From 3/9/22 and 4/13/22

Significant Curriculum Changes

1.1 **ELECTRICAL ENGINEERING**

Mona El Helbawy

[CIM 2/19]

1 program change: BS-EE: BS in Electrical Engineering

Updated distributed sciences so that students must choose two from the following list: CSCI101, CBEN110, GEGN101, CHGN122, or CHGN125. This is how this was listed in the 2019 catalog; it was updated when CSCI101 was made a prereq for CSCI261, but we realized that requiring CSCI101 was a disservice to students coming into Mines with transfer credit for CSCI261. Updated the "Energy Systems and Power Electronics" (ESPE) emphasis area to "Power and Energy Systems" (PES) to better describes the emphasis area. Added CSCI410 as an "Integrated Circuits and Electronics" (ICE) emphasis area elective. Justification for adding CSCI410: Elements

of Computing Systems, looks at the design of a computer system from logic gates to a functional CPU using a hardware description language. The range of topics explore in this class works well with the Integrated Circuits and Electronics track because of this track looks at the design of electronic system containing a large number of individual circuit elements that work together to produce useful emergent behavior. CSCI 410 complements the required ICE course like VLSI design and semiconductor manufacturing by showing students how they would apply the principles learned in these classes to the application of building a computer.

MOTION: To approve the program change in Electrical Engineering to BS-EE: BS in Electrical Engineering by Barankin, seconded by Nilsen. Motion passed unanimously.

1.1.1 [CIM 2/18]

2 course changes: EENG475: INTERCONNECTION OF RENEWABLE ENERGY, INTEGRATED POWER ELECTRONICS, POWER SYSTEMS, AND POWER QUALITY

Updating course description to better describe the course. Additional prerequisites will better prepare students for the course. EENG389 is the core course for ESPE or now PES emphasis. It provides engineering science analysis of electrical machines. In addition, it includes topics on DC, single-phase and three-phase AC circuit analysis; magnetic circuit concepts and materials; transformer analysis and operation; analysis of rotating synchronous, poly-phase induction, and DC machines; as well as laboratory study of external characteristics of machines and transformers. As such, it is required as a prerequisite for power systems and power electronics related subjects.

EENG489: COMPUTATIONAL METHODS IN ENERGY SYSTEMS AND POWER ELECTRONICS

Updated course to 'on demand.' Removed EENG382 as a prerequisite option (course does not exist). Included additional prerequisites to better prepare students for the course. EENG389 is the core course for ESPE or now PES emphasis. It provides engineering science analysis of electrical machines. In addition, it includes topics on DC, single-phase and three-phase AC circuit analysis; magnetic circuit concepts and materials; transformer analysis and operation; analysis of rotating synchronous, poly-phase induction, and DC machines; as well as laboratory study of external characteristics of machines and transformers. As such, it is required as a prerequisite for power systems and power electronics related subjects.

MOTION: To approve the course changes presented in item 1.1.1 by Barankin, seconded by Nilsen. Motion passed unanimously.

1.2 HUMANITIES, ARTS, AND SOCIAL SCIENCE

Jay Straker

[CIM 2/21]

1 course deactivation: HASS325: CULTURAL ANTHROPOLOGY
Faculty departure.

Request made to table the transfer of HASS325 into EDNS for resumed meetings in Fall 2022. Course will not be deactivated in CIM.

MOTION: To table item 1.2 for the 2022-2023 Undergraduate Council by Barankin, seconded by Nilsen. 10 for, 1 opposed.

Minor Curriculum Changes –

The following minor course changes will not be discussed unless specifically requested by Council.

1.4 ELECTRICAL ENGINEERING

Mona El Helbawy

[CIM 2/18]

3 course changes: EENG383: EMBEDDED SYSTEMS

Updating course title and description to better describe the course (Microcomputer Architecture and Interfacing → Embedded Systems).

EENG391: FE ON POWER AND ENERGY STSTEMS

Changed course offering to “on demand”, updating emphasis area title from “Energy Systems and Power Electronics” to “Power and Energy Systems” to better describe the emphasis area.

EENG470: INTRODUCTION TO HIGH POWER ELECTRONICS

Additional prerequisite will better prepare students for the course. EENG389 is the core course for ESPE or now PES emphasis. It provides engineering science analysis of electrical machines. In addition, it includes topics on DC, single-phase and three-phase AC circuit analysis; magnetic circuit concepts and materials; transformer analysis and operation; analysis of rotating synchronous, poly-phase induction, and DC machines; as well as laboratory study of external characteristics of machines and transformers. As such, it is required as a prerequisite for power systems and power electronics related subjects.

1.5 GEOPHYSICS

Ge Jin

[CIM 3/14]

1 course deactivation: GPGN101: INTRODUCTION TO GEOPHYSICS: GEOPHYSICS AND SOCIETY

The department no longer offers this optional course.

1.5.1 1 course change: GPGN228: INTRODUCTION TO GEOPHYSICS

The renaming (Introduction to Rock Physics → Introduction to Geophysics) is more reflective of the content of the course. This course is the first students take in the major.

1.6 PHYSICS

Tim Ohno

[CIM 3/14]

3 course changes: PHGN320: MODERN PHYSICS II: BASICS OF QUANTUM MECHANICS

Replaced Physics Math PHGN311 prerequisite with a more general advanced math linear algebra course.

PHGN435: INTERDISCIPLINARY MICROELECTRONICS PROCESSING LABORATORY

Changed prerequisites to allow students to not in their last year; many juniors in different departments are prepared for the course and Calc III is the highest common core across these disciplines.

PHGN466: MODERN OPTICAL ENGINEERING

Second semester of EM not necessary; the change will also permit non-physics majors to take the course.

1.7 MINING

Jürgen Brune

[CIM 4/4]

1 course change: MNGN318: STATICS AND DYNAMICS COMBINED FOR MN

We submitted MNGN318 Statics and Dynamics for Mining Engineers for UGC approval a few weeks ago and discovered a minor error in the prerequisites:

Instead of Math225 Differential Equations, we only require MATH213 Calculus III.

MOTION: To approve the curriculum items listed in items 1.4 through 1.7 in an omnibus Council vote by Barankin, seconded by Nilsen. Motion passed unanimously.

Subcommittee Updates

Tracks and Emphasis Definitions

Vibhuti Dave

Subcommittee met with department heads, received feedback, and conducted follow-up meeting with the deans and Provost. White paper drafted. Dave had met with the Registrar on logistics. Draft document for Fall 2022.

Course Learning Outcomes

Vibhuti Dave

No updates from the Course Learning Outcomes subcommittee.

Common Exams

Vibhuti Dave

Proposal made to address class size concerns; looked to limit policy to undergraduate courses and limiting requests. Policy change recommended limiting common hour exams to three in a single semester. Due to large incoming class, larger sections within the core curriculum would be prioritized. The enrollment threshold for 100-level and 200-level courses with multiple sections was raised from 100 to greater than or equal to 125 students. Requests that fall outside of the 125-enrollment threshold would be considered based on availability and space.

Language added to ensure instructors provide students with a day off if there is a common exam; history of instructors using class time to provide additional course content prior to common exam. Discussed keeping the "Student Considerations" section within the document.

Language added pertaining the Testing Center. Testing Center reported difficulty keeping up with the number of disability accommodations and historically worked from 8 a.m. to 11 p.m. during exam season with incoming number of students requesting accommodations double or tripled. Testing Center may not be able to accommodate each request due to student schedule conflicts and Testing Center operations. Language made to provide economy to Testing Center to facilitate between faculty and student.

- **Question** on enrollment over 125 and overall flexibility; Registrar's Office would review based on several factors including which exams are being requested, how many sections are involved, and whether the request is being made for a 100-level or 200-level course that does not conflict with other level courses. Myskiw noted the policy was not made to be inflexible, but 100-level courses are prioritized with enrollment of 125 or more students.

Myskiw noted there is a plan to integrate common exams into schedules to remain transparent with students and better schedule rooms in advance. Suggestion made to soften language or add language regarding accommodations for those that may not satisfy the 125-student enrollment.

Adjourn

Jeff King

Meeting adjourned: 5:00 pm.
Next meeting: August for Fall 2022!