Colorado School of Mines – UNDERGRADUATE COUNCIL MEETING MINUTES
October 23, 4:00 – 5:00 pm, via Zoom

Attendees:

Voting Members: 19 total (12 needed for quorum). Quorum was present.

P	Ventzi Karaivanov (chair)	P	Erik Menke (CH)	P	Adam Olsen (LB)	P	Rennie Kaunda (MN)
P	Jason Ganley (CBE)	P	Jeremy Suiter (EB)		Emmanuel De Moor (MME)	P	Mathias Burisch Hassel (GE)
P	Rob Thompson (CS)	P	Ge Jin (GP)	P	Jeff Wheeler (ME)	P	Eliza Buhrer (HASS)
P	Linda Battalora (PE)	P	Hongyan Liu (CEE)		Hisham Sager (EE)	P	Tom Powell (USG)
P	Jack Bringardner (EDS)	P	Gus Greivel (AMS)	P	Chip Durfee (PH)		

Other Regular Attendees and Guests

	Sam Spiegel (Mines Online)	P	Vibhuti Dave (UGS)	P	Kristeen Serracino (AA)	P	Paul Myskiw (RO)
P	Karla Perez-Velez (CASA)		Danielle Boileau (CASA)		Cheryl Medford (GE)	P	D. Scott Heath (RO)
	Katie Ludwin (CASA)		Megan Sanders (Trefny Center)		Colin Terry (SL)		
	Luke Contreras (UA)		Julia Cable (UA)				

Special Guest(s): Scott Houser, Sandy Woodson, Dean Nieusma

Welcome

The results of the survey to move to in-person meetings were shared - 2 votes for in person, 12 votes to remain remote, 5 votes for hybrid. For this semester, UGC will stay on Zoom. Concerns that came up are traveling (those who are away from campus) and after school pickup and activities. For next semester, there is no consensus on the survey to change the time and the majority voted to stay remote. The Graduate Council has decided to change their format and will start meeting in person starting in January at 2:00 pm. The survey will stay open for anyone to add additional feedback, and a second survey will be created to see what times could potentially work to mirror the Graduate Council.

Midterm grading announcement – please have departments review the list of courses to see if any changes need to be made. P. Myskiw added that the Council may need to consider if it is still needed or if it is useful to students. Pushback received from faculty includes lack of information. Currently, only an S and U are given but there have been questions as to why a letter grade is not given which also has students concerned. A broader conversation might address if it should be done or revamped. Why is it only limited to these courses? How will this affect specific student populations such as student athletes?

Approval of Minutes – *October 9, 2024* Ventzi Karaivanov

MOTION: The motion to approve the previous meeting minutes was moved by J. Suiter and seconded by J. Ganley. The motion to approve the previous meeting minutes was approved with 14 approved, 0 opposed, and 0 abstentions. Registration

Briefings and Information Items

Registrar's Office D. Scott Heath for Paul Myskiw

The Banner SaaS migration project will take place over the next week. All student information systems, including Trailhead, Degree Works, Cognos, etc., will be offline starting tomorrow at 5:00 pm until 8:00 am on Wednesday, October 30th. Registration will take place in the week of November 11th. Students have received notification of their registration time tickets and pin. With the system being down, students

have been encouraged to download a PDF copy of their degree audit to assist with advising. The Registrar's Office used faculty feedback received regarding the time tickets. They have been adjusted to 10 till the hour (ex: 8:50, 9:50, 10:50, etc.) for Monday, Wednesday, and Friday classes and at the 15 and 45 marks for Tuesday and Thursday courses. Also, each time ticket is grouped for 100-200 students which will hopefully minimize any disturbances in classes. The Registrar's Office welcomes any additional feedback.

- **Question:** R. Thompson asked, will Canvas be included as one of the applications that will be down?
- **Answer:** D. Scott Heath answered Canvas will not be impacted. Since Banner will be down, there will not be any registration changes. Some applications may still be available but will not be able to sync with Banner.
- **Question:** V. Karaivanov asked if a student's time ticket is at 10 till the hour mark which coincides with the end class, will they stay in the classroom to register? With the new system, is there a larger capacity to handle registration without any issues?
- **Answer:** D. Scott Heath answered that we will see how the students register and how that will impact time between classes. Because the Cloud will be utilized, there will not be as much of a bandwidth issue as there has been in the past. The Registrar's Office does not foresee any issues.

Undergraduate Studies Vibhuti Dave

V. Dave provided reminders to enter the CLLOs into CIM and review Program Overview pages to have them completed by the end of the next academic year. Also, please have departments re-think degree plans to accommodate incoming students with more credit hours. More participation is needed to form the two committees (Core Curriculum Completion and Minors/ASIs) proposed. V. Karaivanov added that both committees need one more faculty from the ESP portfolio to complete them and start meeting.

- **Question:** J. Suiter asked for more detailed information on the course level learning outcomes. What is the driving force to get these added to the catalog?
- **Answer:** V. Dave answered the conversation started a few years among a committee to add CLLOs to the catalog as best practice and to be as transparent as possible with students. The course level learning outcomes give students more insight into the courses than just reviewing the course description or trying to locate course syllabi. Additionally, HLC and ABET look for course level learning outcomes which are easier to find if they are listed in the catalog. Course level learning outcomes can also be helpful for new faculty. Minor changes in CLLOs will be processed administratively and will not require Council review unless the changes are significant.
- **Question:** E. Buhrer asked what is the deadline to have the CLLOs added to courses?
- **Answer:** K. Serracino answered that the deadline would be January of 2026 to have the CLLOs completed in the 2026-2027 catalog.

4:25-4:30 pm

1 Curriculum Item(s) for Council Vote

1.1

CS		Rob Thompson
CIM 9/17		
2 new courses:	CSCI413: ADVANCED DATA SCIENCE	
	How will this course specifically advance Mines@150 Mission, Vision and Strategic Plans? We are upgrading the current CSCI 303 course by introducing both 400-level and 500-level CSCI designations. This update involves a	

	comprehensive revamp of the course materials, sequencing, and pacing, along with a stronger emphasis on more complex thinking. Additionally, the new course will require a deeper focus on research and hands-on practice with computational challenges relevant to data science. In addition to allowing our computer science students to take this new course as a 400-level elective and explore solutions to computational challenges related to working with data, the interdisciplinary nature of the course will provide them with the opportunity to collaborate in diverse groups of students from various fields. This initiative supports the Mines@150 mission by fostering a strong relationship with the interdisciplinary data science program, certificates, and graduate students. Specifically, it aligns with the goal of 'expanding our offerings and diversifying delivery, particularly for professionally oriented pre- and post-graduate education.' Provide detail about how the course will be delivered: Residential (less than 50% of course delivered online) or Online. The course will be delivered in-person, residentially. Notes: there is currently an in-person and online version similar to this (DSCI 503) that has been developed during the summer of 2023. The course, learning outcomes, and overall content was reviewed closely and approved through Mines online. The big difference is the students in the CSCI version will have a "computational challenge project" and additional expectations within the research component of the project(s).
	CSCI421: INTRODUCTION TO HUMAN COMPUTER INTERACTION
	HCI is a subfield of Computer Science that is respected, large, and still growing. It is also currently entirely unrepresented both within the CS department and the university as a whole. This course advances the vision of Mines@150 by expanding and modernizing the topics made available for study at the undergraduate level. HCI as a topic also represents a unique synthesis of principles from cognitive and social sciences with computer science; one that emphasizes the potential for cross-disciplinary work within CS.

Canvas Voting Results:

- CSCI413 – 11 approved, 0 opposed, 0 abstentions
- CSCI421 – 13 approved, 0 opposed, 0 abstentions

1.2

HASS		Eliza Buhrer
CIM 9/17: Provost 9/17		
1 new course:	HASS462: AMERICA DECLASSIFIED: THE SECRET HISTORY OF INTELLIGENCE	
13 approved, 0 opposed, 0 abstentions	Mines@150 envisions students who are able to learn and adapt in a world where information and socio-technical innovation happens at unprecedented speed. For students to make sense of this world, they must be able to assess critically competing claims of truth and contradictory evidence. They must be able to seek out and make sense of new information constantly. And they must develop skills to understand their contemporary environment and anticipate future change. All of these core skills just happen to lie at the heart of the craft of intelligence.	

	This course uses an item of innate fascination – the world of spies and lies – to engage students in the world around them, to develop their skills as analysts and communicators, and to build their information literacy. It also applies the insights of historical thinking to contemporary and future problems.	
HASS		Eliza Buhrer/Sandy Woodson
CIM 9/24: Provost 9/25		
1 new course:	HASS215: FUTURES	
	Justification for Request (How will Mines@150 mission be advanced?): 1. Expand offerings and diversify delivery—this is the new signature student experience in the Mines Core. 2. Encourage interdisciplinarity collaboration by incorporating different intellectual approaches from a variety of disciplines . 3. Strengthen affinity for Mines among our students, alumni, faculty, researchers, and external partners 4. Lays the groundwork for differentiated and highly desired STEM-educated leaders FUTURES invites students to envision possibilities around critical issues related to the future of science and engineering. It is central to the Mines core curriculum and encouraged during the first years at Mines. Guided by four instructors who share perspectives from a wide range of humanities, social science, and applied disciplines, students will explore future-oriented themes at the forefront of advances in science, engineering, technology and society, such as Energy Futures, Technology Futures, and Critical Resource Sustainability, among others. By the end of the course students will gain skills in integrating multiple perspectives and connecting them to their own interests and trajectory at Mines and beyond.	

Canvas Voting Results

- HASS462 – 13 approved, 0 opposed, 0 abstentions

HASS215 Additional Discussion - Canvas

- **Question:** V. Karaivanov asked Slide 5 implies that the seminal instructors rotate between the cohorts X, Y, and Z. Slide 7 shows three different seminar instructors for each theme and sub-theme focus. Does slide five imply that if we have 3 sections (X, Y, Z) studying the same theme/sub-theme, the seminar instructor will rotate between the X, Y, and Z sections? How do you define "slot"? Is this a 1-course teaching load?
- **Answer:** S. Woodson answered there are 100 students/class, that are divided into 3 cohorts (33/34 students each). Each seminar instructor teaches the same content three times, once for each cohort. Each of the three cohorts has each (of the three) seminar instructors rotating through. This counts for one three credit-hour course for each of the instructors: they're holding class for 12 weeks, plus working on the encounter, meeting with students and grading during the "off" weeks. It's 75 SCH/instructor.
- **Question**: V. Karaivanov asked in the current setup of HASS200, how many faculty members would be involved with delivering the course to 800 students?
- **Answer:** S. Woodson answered Each section of Global Studies has 75 students, with one professor/section. So for 800 students, it would be ~10 faculty. (We currently run ~7 sections/semester, with anywhere from 2-5 of those sections being covered by adjuncts. We also

run 1-2 sections over summer, depending on enrollment. The summer sections are taught by full-time faculty.) I'm not sure I said this during the meeting, but Futures will NOT be taught by adjuncts.

C. Durfee added that an additional question was posted regarding field trips but did not get a response via Canvas. The question stated: Recently, the FUTURES pilot hosted a field trip that took place on one of three days – a Wednesday, a Friday, or a Thursday. PHGN200 holds its group-based studio sessions on Wednesdays and Fridays, and our major course assessments (we call them quizzes, but they're more like short exams) commonly happen on Thursdays. We need to arrange makeups for any missed major course assessments. Many of the studio sessions can't be made up – they require specialized equipment setups and in-person assistance, and so are simply lost educational experiences. While we can debate the appropriateness of one course taking class time away from another course at all, the scale of this issue becomes unmanageable if FUTURES is a core course taken by all Mines students. PHGN200 enrollment has peaked at about 720 students and will probably stay there in the near-to-midterm. If every student takes FUTURES, and if FUTURES happens in the same year (though not the same semester) as intro physics, we can estimate that there may be as many as 360 PHGN200 students that are also in FUTURES in a particular semester. Each of those students will miss at least one additional day of instruction, and the fact that they will be spread over three days per field trip makes the situation worse, not better. One field trip would leave us with, potentially, 120 additional makeup assessments to schedule and two studio days during which 1/6th of the class is missing. The latter would, among other things, play havoc with our group structures. All three of those instructional days would be significantly compromised. The proposal we're hearing would have us dealing with one or more such events in each of PHGN100 and PHGN200 in perpetuity. That is more than we can handle. While FUTURES in many ways sounds like an interesting and exciting new course, we would encourage its developers to consider a structure that creates no direct interference with other courses.

- **Answer:** S. Woodson answered Ali Kerr received a $25K award from Faculty Senate as an SSE that will help fund field trips. For the future, field trips may not be as frequent or will be scheduled on Saturdays. There is understanding around the concern of field trips interfering with other courses. Ways to minimize this are being discussed.
- **Question:** C. Durfee asked, was there a course in the core that this course is replacing?
- **Answer:** S. Woodson answered that it is replacing the core course, Global Studies, but differs significantly (different learning outcomes, more experiential, more active). Global Studies will still be available for students who are still on catalogs that require this course or if there are students who can't get into the Futures course.
- **Comment:** V. Karaivanov added that concerns have been shared with Senate about staffing and resources. The deans will be invited to the next Senate meeting for further discussion.

MOTION: The motion to approve HASS215 was moved by and seconded by. The motion to approve HASS215 was approved with 13 approved, 2 opposed, and 1 abstention.

1.3

EB		Jeremy Suiter
CIM 9/18		
1 course change:	EBGN310: ENVIRONMENTAL AND RESOURCE ECONOMICS	
	Since EBGN201 is no longer in the core, we are removing the prerequisite for some of the 300-level economics courses that can be used to satisfy the CAS elective credit. The relevant learning outcomes	

	from EBGN201 will be introduced and integrated into this course.

Canvas Voting Results
12 approved, 0 opposed, 0 abstentions.

1.4 **Minor Changes – to be considered as a single vote**

HASS		Eliza Buhrer
CIM 9/23		
1 new course:	HASS420: SPECULATIVE FICTIONS: CREATIVE WRITING, SCIENTIFIC INNOVATION, AND THE FUTURE	
	This course is designed to expand upon the themes and skills introduced in the HASS core classes (Nature and Human Values and Global Futures) and contribute to the achievement of the CSM Mission Statement through "the creation, integration and exchange of knowledge in engineering, the natural sciences, the social sciences, the humanities, business, and their union." While maintaining a primary focus on the themes and the craft of writing and the evaluation of writing, this class also incorporates substantial amounts of information drawn from contemporary writing masters and scholars in order to present a comprehensive view of the major patterns of literature. It has been demonstrated scientifically that reading and experiencing literature improves empathic behaviors, which puts this class in line with the goals from the Strategic Plan, "The Mines student graduates with a strong sense of integrity, intellectual curiosity, demonstrated ability to get a job done in collaborative environments, passion to achieve goals, and an enhanced sense of responsibility to promote positive change in the world." Upon completion of the course, students will possess a more comprehensive understanding of the way understanding literature helps us understand the world, and synchronizes with ABET goals of, "communicating effectively," "Recognizing the need for, and an ability to engage in life-long learning," and sets them up to better apply "knowledge of contemporary issues." Literature and Writing courses set students up to apply the "broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context" as defined by ABET, and this course will be essential to the HASS Department goals of, "prepare[ing] people to live and work in a complex, dynamic world; understand the meaning and implications of "Stewardship of the Earth"; and communicate effectively in written and oral forms	
ENERGY		Paulo Cesar Tabares Velasco
CIM 9/25		
1 new course:	ENGY450: FUNDAMENTALS OF SOLAR ENERGY ENGINEERING	
	Solar energy is an important and growing component of our energy system. Solar Energy can not only reduce greenhouse gas emissions and global warming, but distributed generation can also save homeowners, businesses, and industry considerable amounts of money through utility	

	cost savings. As opportunities for solar energy grow and consequences of fossil fuel use mount, we must evolve from goals based on solar electric capacity (MW) and production (MWh), to consideration of exactly where and when those MW of solar power are delivered and the resulting effect on the overall energy system. And in order to save the planet, we must also expand our scope into thermal energy to displace fuels and solar energy to meet transportation requirements.	
AMS		Gus Greivel
CIM 9/26		
1 course change:	MATH484: MATHEMATICAL AND COMPUTATIONAL MODELING (CAPSTONE)	
	We are refining the AMS Computational and Applied Mathematics Modeling Sequence (MATH310, MATH431, and MATH484) to better scaffold modeling concepts as students progress through our curriculum. Topics are being organized to focus on discrete time mathematical models in MATH310, continuous time mathematical models in MATH431, and continuous time models with spatial variables in MATH484. We are also cleaning up the prerequisite structure within this sequence. Remove MATH307 as a prerequisite.	
CBE		Jason Ganley
CIM 10/3		
1 course deactivation:	CBEN308: HEAT TRANSFER	
	CBEN 308 has been replaced with CBEN 314 in the undergraduate catalog and the grad catalog needs to be updated accordingly to avoid confusion.	

MOTION: The motion to approve minor changes was moved by G. Greivel and seconded by J. Suiter. The motion to approve the minor changes was approved with 15 approved, 0 opposed, 0 abstentions.

2 Continued Business

2.1

AMS		Gus Greivel
CIM 9/26		
2 course change:	MATH310: INTRODUCTION TO MATHEMATICAL MODELING	
	We are refining the AMS Computational and Applied Mathematics Modeling Sequence (MATH310, MATH431, and MATH484) to better scaffold modeling concepts as students progress through our curriculum. Topics are being organized to focus on discrete time mathematical models in MATH310, continuous time mathematical models in MATH431, and continuous time models with spatial variables in MATH484. We are also cleaning up the prerequisite structure within this sequence. Remove CSCI128 as a prerequisite.	
	MATH431: MATHEMATICAL BIOLOGY	
	We are refining the AMS Computational and Applied Mathematics Modeling Sequence (MATH310, MATH431, and MATH484) to better scaffold modeling concepts as students progress through our curriculum. Topics are being organized to focus on discrete time mathematical	

	models in MATH310, continuous time mathematical models in MATH431, and continuous time models with spatial variables in MATH484. We are also cleaning up the prerequisite structure within this sequence.

4:30-4:45 pm

3 New Business

3.1

CH		Erik Menke
CIM 10/15		
1 program change:	BS-CHM: BS in Chemistry	
	We need to do an update to our tech electives list from business/econ as they have deleted some and added some. The below list is what they suggest we should accept for tech electives: • EBGN305 – Survey of Accounting • EBGN308 – Principles of Marketing • EBGN309 – Fundamentals of Management • EBGN345 – Principles of Corporate Finance (pre-requisite EBGN305) • EBGN346 – Introduction to Investments (pre-requisite EBGN305) • EBGN351 – Introduction to Decision Science • EBGN360 – Introduction to Entrepreneurship • EBGN453 – Project Management	

5:00 pm **Adjourn** at 5:00 PM Ventzi Karaivanov

Next meeting: November 13, 4:00-5:00 pm via Zoom. Please send agenda items to Ventzi Karaivanov (vkaraiva@mines.edu) and Kristeen Serracino (kristeen.serracino@mines.edu) one week prior.