

Colorado School of Mines – UNDERGRADUATE COUNCIL MEETING MINUTES
 March 13, 4:00 – 5:00 pm, via Zoom

Attendees:

Voting Members: 15 total (10 needed for quorum). Quorum was present.

P	Ventzi Karaivanov (chair)	P	Andrew Pederson (EB)	P	Mike Nicholas (AMS)	P	Chuck Stone (PH)
P	Michael Barankin (CBE)	P	Jay Straker (HASS)	P	Gerald Bourne (MME)	P	Rennie Kaunda (MN)
P	Dylan Domaille (CH)	P	Ge Jin (GP)	P	Zibo Wang (CS)		Mathias Burisch Hassel (GE)
P	Linda Battalora (PE)	P	Shiling Pei for Hongyan Liu (CEE)	P	Jeff Wheeler (ME)		Mark Bowen (USG)
P	Jack Bringardner (EDS)	P	Brianna Buljung (LB)	P	Hisham Sager (EE)		

Other Regular Attendees and Guests

	Sam Spiegel (Mines Online)		Dixie Cirillo (PA)	P	Kristeen Serracino (AA)	P	Paul Myskiw (RO)
	Karla Perez-Velez (CASA)	P	Vibhuti Dave (UGS)	P	Deb Jordan (Trefny Center)	P	D. Scott Heath (RO)
	Katie Ludwin (CASA)	P	Danielle Boileau (CASA)		Cheryl Medford (GE)		Colin Terry (SL)

Special Guest(s): Pooja Sankar

Welcome

Ventzi Karaivanov

Approval of Minutes – February 28, 2024

Ventzi Karaivanov

MOTION: Motion to approve previous minutes was moved by L. Battalora and seconded by G. Jin. The previous minutes were approved with 13 approved, 0 opposed, and 2 abstentions.

Briefings and Information Items

Registrar's Office

Paul Myskiw

P. Myskiw requested input from the council regarding the policy for returning students. Currently, if a student has been gone for more than 10 years, they must get approval from the department in which the class was offered for that class to continue to count toward the progress of their degree. Over the past three years, Mines has had about 475 students return to Mines after taking time away from the institution (average of 80 students per term). Only 22 of those students have been gone for more than 10 years. 287 out of the 475 have been gone within the last 5 years. 166 students have been between six and nine years. Often when these students return, they return as part-time adult learners. For the six-to-nine-year students, credit hours will fall off their academic history and their degree. They will get approval for those four classes but then at the end of the next semester the same thing will happen for however long they were gone. It is frustrating to students, and they are confused about what they are supposed to do. At the department end, these courses are typically always granted. P. Myskiw suggested that as long as the student returns within the 10-year window, Mines would not require permission after each term as long as the student remains enrolled and finishes.

- **Question:** G. Bourne asked if there is a reason to just restart their clock once the student is readmitted?
- **Answer:** P. Myskiw answered that this is why feedback is being requested.
- **Question:** V. Karaivanov asked when students are readmitted, are they continuing the same catalog they were initially on, or do they get a new catalog?



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- **Answer:** P. Myskiw answered that there is a statement in the catalog that states a student is eligible to use any catalog that they have been under or any catalog forward. They just cannot use the catalog prior to their first term of attendance.
- **Comment:** V. Karaivanov asked that everyone forward this for discussion within their departments and continue discussion at the next UGC meeting.
- **Comment:** P. Myskiw mentioned that between now and the next meeting, he would send the current policy and draft up language around a suggested new policy.

Follow up on listing the semester offered in the catalog

Ventzi Karaivanov

There was discussion during the last meeting regarding how courses are listed in the catalog and the semesters that they are offered and if this is needed. Currently, some courses list the semester as I/II and some include fall/spring. V. Karaivanov asked if there was any feedback from the departments on this issue.

- **Comment:** A. Pederson mentioned that his department thought there was no reason to include the semester offered. It is more important to focus on courses that are actually offered to have a clean catalog.
- **Comment:** J. Wheeler mentioned that after speaking with the ME director of UGS, there was no opposition to dropping the semester offered from the catalog.
- **Comment:** V. Karaivanov suggested circulating feedback again and perhaps bring it to a vote during the next meeting.

1. Curriculum Item(s) for Council Vote

1.1

Computer Science		Zibo Wang
CIM 1/22		
1 program change:	BS-CS: BS IN COMPUTER SCIENCE	
	<p>- All tracks: Added CSED435 and INNO444 to the list of acceptable CS Electives.</p> <p>- CS + Business track: Updated list of Business electives to reflect courses that moved to Mines core or are no longer offered; replaced with new courses that have recently been added.</p> <p>- CS + Data Science track: Removed MATH439 (no longer offered) and replaced with MATH433</p>	

MOTION: Motion to approve the BS-CS program change was moved by M. Barankin and seconded by A. Pederson. The BS-CS program change was approved with 14 approved, 0 opposed, and 0 abstentions.

1.2

CEE		Hongyan Liu
CIM 2/7		
1 course deactivation:	CEEN477: SUSTAINABLE ENGINEERING DESIGN	
	Cross-list with graduate course CEEN593.	
1 New course:	CEEN493: SUSTAINABLE ENGINEERING DESIGN	

	Cross-list with graduate course CEEN593. This is the graduate version of an existing undergraduate course. The course provides a comprehensive introduction into sustainability concepts from an engineering point of view, incorporating the quantitative consideration of environmental and health impacts as well as social considerations throughout the design analysis. These concepts and approaches are embedded in our disciplinary educational expectations and advance Mines' mission, vision and strategic plan.
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MOTION: Motion to vote on CEEN477 and CEEN493 as one item was moved by S. Pei and seconded by M. Barankin. The motion vote on CEEN477 and CEEN493 as one items was approved unanimously with zero opposition and zero abstentions.

MOTION: Motion to approve CEEN477/CEEN493 was moved by S. Pei and seconded by M. Barankin. CEEN477/CEEN493 was approved with 16 approved, 0 opposed, and 0 abstentions.

1.3

AMS		Mike Nicholas
CIM 1/31		
1 course change:	MATH440: PARALLEL SCIENTIFIC COMPUTING	
	Changing from Spring to Fall.	

MOTION: Motion to approve the MATH440 course change was moved by M. Barankin and seconded by S. Pei. The MATH440 course change was approved with 14 approved, 0 opposed, and 0 abstentions.

- **Question:** A. Pederson asked if the policy to remove semester from course listing is approved, will this proposal be removed?
- **Answer:** V. Karaivanov and P. Myskiw answered that this course change prompted the discussion initially. If approved, the course change would no longer be needed.

1.4

EDNS		Jack Bringardner
CIM 1/11/24		
3 Course deactivations	EDNS325: CULTURAL ANTHROPOLOGY	
	Mines Faculty Senate Fall 2023 request to deactivate courses no longer offered.	
UGC Voting Results:	9 approved, 3 opposed, and 4 abstentions	
	EDNS375: ENGINEERING CULTURES	
	Mines Faculty Senate Fall 2023 request to deactivate courses no longer offered.	
	EDNS475: ENGINEERING CULTURES IN THE DEVELOPING WORLD	
	Mines Faculty Senate Fall 2023 request to deactivate courses no longer offered.	

- **Comment:** M. Barankin requested these curriculum items be tabled for further discussion at Faculty Senate.
- **Comment:** V. Karaivanov spoke to the President of Faculty Senate, and it was requested that these items be voted on as a recommendation from UG Council to the Senate.

MOTION: Motion to table the EDNS course deactivation for further discussion was moved by M. Barankin and seconded by G. Jin. The motion was 0 approved, 7 opposed, and 9 abstentions. The motion to table the EDNS course deactivation for further discussion was not approved.

MOTION: Motion to approve the EDNS325 course deactivation was moved by A. Pederson and seconded by J. Bringardner. The motion to approve the EDNS325 course deactivation was approved with 9 approved, 3 opposed, and 4 abstentions.

MOTION: Motion to approve the EDNS375 course deactivation was moved by M. Barankin and seconded by A. Pederson. The motion to approve the EDNS375 course deactivation was approved with 11 approved, 1 opposed, and 3 abstentions.

MOTION: Motion to approve the EDNS475 course deactivation was moved by A. Pederson and seconded by G. Jin. The motion to approve the EDNS475 course deactivation was approved with 13 approved, 2 opposed, and 1 abstention.

Minor Changes – to be considered as a single vote

MECH		Jeff Wheeler
CIM 2/22		
1 new course:	MEGN385: INTRODUCTION TO CNC AND CAM PROGRAMMING	
	<p>The course has been offered twice as special topics. Applying for a permanent number.</p> <p>This is a 1 credit hour elective course within Mechanical Engineering focused on providing students with hands-on experience programming and operating CNC milling machines. CNC machines are an essential manufacturing method for many products today. Providing hands-on instruction on these tools prepares students to design manufacturable and economically efficient parts. Using real CNC machines to fabricate parts of their own design is a signature experience for mechanical engineering students.</p>	
CEE		Hongyan Liu
CIM 2/19		
2 course change:	CEEN210: Introduction to Civil Infrastructure	
	Updating semester offered.	
	CEEN402: Project Engineering	
	Updating semester offered.	

MOTION: Motion to approve the minor changes to be considered as a single vote was moved by M. Barankin and seconded by J. Wheeler. The minor changes were approved with 15 approved, 0 opposed, and 0 abstentions.

2. New Curriculum Item(s)

2.1

AMS		Mike Nicholas
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CIM 2/28	
1 course change:	MATH431: MATHEMATICAL BIOLOGY
	Adding an option of BIOL300 as a prerequisite so that QBE students can take MATH431. This is a course that QBE students have often wanted to take in the past, but the MATH310 prerequisite is difficult for them.

Math Biology is a course that QBE students often want to take as one of their quantitative electives. However, it is hard for them to take it because it has a MATH310 prerequisite. This course change proposes to change the prerequisite to BIO300 or MATH310.

2.2

CBE		Michael Barankin
CIM 3/6		
1 course change:	CBEN472: INTRODUCTION TO ENERGY TECHNOLOGIES	
	Semester varies.	

2.3

Minor Changes – to be considered as a single vote

CS		Zibo Wang
CIM 2/29		
1 new change:	CSCI460: SOFTWARE TECH STARTUPS: FROM IDEA TO LAUNCH	
	This course offers students a deeper understanding of the dynamics involved with launching a new software startup from the founder’s perspective. In turn, this enables students to enhance their own decisions down the line about pursuing a career as a founding/early team member of a new venture in the software space. This course also offers unique applications when it comes to interpersonal dynamics in building high-performing teams, in developing operational excellence and time management skills, as well as the ability to negotiate with executives in opportunities and awareness of ones’ status. This course is designed to be integrative and allows students to pull from skills across several different facets of their education.	

This course has been offered as a special topics course twice, so this course change is added a permanent course number. It will be taught by the founder and CEO of Piazza.

- **Question:** A. Pederson asked how much course overlap is there with Introduction to Entrepreneurship?
- **Answer:** Z. Wang answered that the course was designed individually and did not consider the overlap with Introduction to Entrepreneurship. However, this course is taught in a niche style with more focus on communications and collaboration and in the in-class lecture experience.
- **Question:** A. Pederson asked if students could take this course and Introduction to Entrepreneurship if there is considerable overlap.

- **Answer:** Z. Wang answered that this course is an elective and not required in any curriculum. Students can choose based on their preferences to take this course in conjunction with Entrepreneurship. This course is more about software and applies to computer science rather than a broad entrepreneurship course.
- **Comment:** P. Myskiw added someone needs to do the comparison and evaluation to see if there is a 60%-70% overlap. If there is significant overlap, the courses would need to be made mutually exclusive so students could not get credit for both.
- **Question:** S. Sager asked what is the allowed overlap? Is there a threshold for overlapping between courses?
- **Answer:** P. Myskiw answered the general rule of thumb is 60%-60% overlap. However, it is up to the faculty to decide course by course if there is enough overlap that you would not want a student in the program to take both.
- **Question:** V. Karaivanov asked if CS knows the makeup of the students that have taken the course before such as CS majors only or from other departments?
- **Answer:** P. Sankar answered that CSCI306 is a prerequisite to this course, so it is necessary that students have strong software development skills. In class, they build and launch an app. The last quarter of the class is about iterating with user feedback and driving user adoption of the app, so it is taken mostly by CS students.
- **Comment:** V. Dave recommended connecting with Sid Saleh to make sure he is in the loop about this and getting his insight and input.
- **Comment:** A. Pederson added to also loop in Becky LaFrancois in this discussion.

3. Continuing Curriculum Item(s) for Discussion

3.1

CEE		Shiling Pei for Hongyan Liu
CIM 2/19		
2 course changes:	CEEN267: Design II: Civil Engineering	
	Need to update the prerequisites to expand eligible courses. HRNS115 and HNRS198B	
	CEEN473: Hydraulic Problems	
	Need to add an additional prerequisite option as the curriculum grows. CEEN310 or CBEN307	

3.2

AMS		Mike Nicholas
CIM 2/22		
6 course deactivations:	MATH113: CALCULUS FOR SCIENTISTS AND ENGINEERS II – SHORT FORM	
	This course is not offered and will not be offered again.	
	MATH214: CALCULUS FOR SCIENTISTS AND ENGINEERS III – SHORT FORM	

	This course is not offered and will not be offered again.
	MATH224: CALCULUS FOR SCIENTISTS AND ENGINEERS III HONORS
	This course is not offered and will not be offered again.
	MATH340: COOPERATIVE EDUCATION
	This course is not offered and will not be offered again.
	MATH348: ADVANCED ENGINEERING MATHEMATICS
	This course is not offered and will not be offered again.
	MATH492: UNDERGRADUATE RESEARCH
	We do not teach this anymore, and we do not anticipate teaching it again. Also, there is a MATH491 with the same title/description that is repeatable for credit.

3.3

EE		Hisham Sager
CIM 2/13		
1 course change:	EENG429: Active RF & Microwave Devices	
	<p>Our EENG430/EENG530 course introduces the design of passive microwave circuits. These circuits are essential components of all modern communications and radar systems. While EENG429/529 appears to be a separate topic on active devices, the ability of the students to design and understand an active device, for example, a power amplifier, requires to the ability to design and understand passive devices, e.g., a matching network. Traditionally, students have self-selected or have been advised to take the courses in the 430/530 then 429/529 sequence and pre-reqs haven't been an issue. However, with increasing interest in the course we have recently run into situations where students enrolled in 429/529 have not been properly equipped to handle the course contents. These pre-req changes are requested to ensure that students are not overloaded and can be successful in their studies.</p>	

These courses are offered as elective courses. EE noticed that students who have taken one before the other do better in understanding the material so propose making EENG430 a prerequisite for EENG434 (currently listed as EENG429).

- **Comment:** V. Dave asked for clarification that this change is asking to make a technical elective a prerequisite for another technical elective. She recommended proceeding with caution because this change will take away some options from students.

3.4

CEE		Hongyan Liu
CIM 2/19		
16 course changes:	CEEN241: Statics	

	Delete “virtual work” from catalog description.
	CEEN311: Mechanics of Materials
	Updating semester offered.
CIM 2/22	CEEN315: Civil and Environmental Engineering Tools
	Updating semester offered.
	CEEN350: Civil and Construction Engineering Materials
	Updating semester offered.
	CEEN381: Hydrology and Water Resources Engineering
	Updating semester offered.
	CEEN401: Life Cycle Assessment
	Updating semester offered.
	CEEN405: Numerical Methods for Engineers
	Updating semester offered.
	CEEN406: Finite Element Methods for Engineers
	Updating semester offered.
	CEEN410: Advanced Soil Mechanics
	Updating semester offered.
	CEEN411: Unsaturated Soil Mechanics
	Updating semester offered.
	CEEN419: Risk Assessment in Geotechnical Engineering
	Updating semester offered.
	CEEN421: HIGHWAY AND TRAFFIC ENGINEERING
	Updating semester offered.
	CEEN425: Cementitious Materials for Construction
	Updating semester offered.
	CEEN426: Durability of Concrete
	Updating semester offered.
	CEEN461: Fundamentals of Ecology
	Updating semester offered.
	CEEN470: Water and Wastewater Treatment Processes
	Updating semester offered.
	CEEN475: Hazardous Site Remediation Engineering
	Updating semester offered.

Adjourn

Meeting adjourned: 4:54 pm.

Next meeting: March 27, 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.