

Colorado School of Mines – UNDERGRADUATE COUNCIL MEETING MINUTES
 March 27, 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)		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	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

P	Sam Spiegel (Mines Online)		Dixie Cirillo (PA)	P	Kristeen Serracino (AA)	P	Paul Myskiw (RO)
	Karla Perez-Velez (CASA)	P	Vibhuti Dave (UGS)		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): Sid Saleh, Xerxes Steirer, Pooja Sankar, Iris Bahar

Welcome

Ventzi Karaivanov

Approval of Minutes – March 13, 2024

Ventzi Karaivanov

MOTION: Motion to approve previous minutes was moved by M. Barankin and seconded by H. Sager. The previous minutes were approved with 14 approved, 0 opposed, and 0 abstentions.

Briefings and Information Items

Registrar’s Office

Paul Myskiw

D. Scott reminded the council that registration starts next week.

- **Question:** G. Bourne asked for clarification on adding a waitlist to all undergraduate course listing. If a student wants to take a class this is full and it is taught at the same time as another class that has open seats and they register for the open-seated class, can they also get on the waitlist for the class that is closed without a time override?
- Answer: S. Heath answered yes, the student should be able to do that.
- Question: What is the motivation behind adding waitlists? Will this be something all departments must do?
- V. Dave answered that this is not policy but rather an experiment to see if waitlists are added, will that help gauge demand, figure out how many seats are needed for students, and be able to respond to that demand by moving the course to a bigger room or adding another section. This would also provide more consistency across campus with standardized waitlists. For all undergraduate courses, this will be expected but there are exceptions such as lab courses.
- Question: A. Pederson asked why is there a limit of 20 for the waitlists?
- Answer: S. Heath answered that it is possibly a minimum of 20 and to allow uniformity across the board.
- Question: A. Pederson asked is there a checkbox on the waitlist form that states the student is in the class in another section? It will difficult to gauge demand if there are is no separation between students that are already in the class but do not like the time slot, for example.



- Answer: S. Heath answered that there is not a way to prevent a student who is enrolled in one section from adding themselves to a waitlist in another section. There are ways to run reports to collect information and identify if a student is on multiple waitlists.
- Question: V. Karaivanov asked how will the waitlists be resolved at the end?
- Answer: S. Scott answered at the end of the add period, anyone who is not in the course would be dropped from the waitlist and the class would be full.
- Comment: P. Myskiw added that the waitlist conversation started in the middle of the fall to get a better sense of course demand between the deans, dh's, provost, and registrar. It was discussed that it wouldn't be perfect because students will put themselves onto multiple waitlists. As a result, there are additional tools being developed for department schedulers to have access to the data of demand based on the student's degree audit and what courses have not been taken yet. Adding a waitlist will also improve the registration process and maximize capacity in every section. P. Myskiw added that communication will be sent out to the students noting that a waitlist is not a guaranteed spot and for students to build their schedule as best as possible with other courses.

Follow up on policy for returning students

Paul Myskiw

The Registrar's Office has been getting numerus questions regarding returning after taking a leave of absence. Courses will fall off the student's degree audit once students hit the 10-year span. Students then submit an override for these courses to allow the 10-year course to apply but then the following semester, the student must do the same process. This policy change would allow students to still use those courses toward their degree and not have to get approvals every term.

- Question: M. Barankin asked, does the language that is currently in the policy not include that the "start of program" applies to the student's return date? This might help in evaluating courses older than 10 years upon the student's return all at once instead of after each term.
- Answer: S. Heath answered that he will have to get clarification as the interpretation of "start of program" could be considered when a student returns instead of when the student initially starts their program.

1. Curriculum Item(s) for Council Vote

1.1 Listing the semester offered in the catalog

Ventzi Karaivanov

Did not vote on this item.

1.2

CEE		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	

MOTION: Motion to approve CEEN267 and CEEN473 course changes was moved by M. Barankin and seconded by H. Sager. The CEEN267 and CEEN473 course changes were approved with 15 approved, 0 opposed, and 0 abstentions.

1.3

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 don't anticipate teaching it again. Also, there is a MATH491 with the same title/description that is repeatable for credit.	

MOTION: Motion to approve the 6 AMS course deactivations was moved by M. Barankin and seconded by G. Jin. The 6 AMS course deactivations were approved with 15 approved, 0 opposed, and 0 abstentions.

1.4

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>	

MOTION: Motion to approve the EENG429 course change was moved by M. Barankin and seconded by G. Bourne. The EENG429 course change was approved with 15 approved, 0 opposed, and 0 abstentions.

1.5 **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.	

S. Saleh worked with P. Sankar to come up with a way to identify any overlap between this course and INNO444 to ensure broad coverage and avoid redundancy. CSCI460 delivers a deep dive into software development with a working beta product whereas INNO444 starts with very broad problems that may or may not lead to software development. There may be a little bit of overlap, but it is meaningful because it is important to emphasize the same concepts and make sure students are seeing consistency across all courses in the same topic area. S. Saleh recommended that students be allowed to take both courses and earn credit for both courses because they complement each other.

P. Sankar added that she did a few revisions on the course in the past week to clearly define to students that this course includes launching a startup in the software space. I. Bahar added that this course will be a great addition for Computer Science. It has been offered a couple of times and some nice projects have come out of it. A. Pederson added that Economics and Business are in support of this course as well.

MOTION: Motion to approve CSCI460 was moved by M. Barankin and seconded by J. Bringardner. CSC460 was approved with 15 approved, 0 opposed, and 0 abstentions.

1.6 (Need for vote is pending on voting result of 1.1)

CEE		Hongyan Liu
CIM 2/19		
16 course changes:	CEEN241: Statics	
	Delete “virtual work” from catalog description.	

MOTION: The motion to approve the CEEN241 course change was moved by M. Barankin and seconded by H. Sager. CEEN241 was approved with 13 approved, 0 opposed, and 0 abstentions

CEE		Hongyan Liu
CIM 2/19		
	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.

MOTION: Motion to approve the 16 CEEN course changes were moved by H. Sager and seconded by M. Barankin. The 16 CEEN course changes were approved with 13 approved, 0 opposed, and 0 abstentions.

2. New Curriculum Item(s) for Introduction

2.1

ENGY		Xerxes Steirer
CIM 3/21		
1 course change:	ENGY419 : THE PRINCIPLES OF SOLAR ENERGY SYSTEMS	
	<p>Overview of the solar resource and components of solar irradiance; principles of photovoltaic devices and photovoltaic system design; photovoltaic electrical energy production and cost analysis of photovoltaic systems relative to fossil fuel alternatives; introduction to concentrated photovoltaic systems and manufacturing methods for wafer-based and thin film photovoltaic panels. 3 hours lecture; 3 semester hours.</p> <p>Offering at least one solar energy course on a continual basis specifically advances Mines@150 Mission, Vision and Strategic Plans. First, today's students demand classes in sustainable energy including solar energy. This course has been offered in the past (formerly PHGN419 - no longer offered, and ENGY498) with high attendance rates and great student feedback. Not offering a solar energy course would be in direct opposition to the M@150 goal of expanding our offerings. Second, the Vision of Mines @150 includes energy in all its forms, from production, manufacturing and use topical areas. The energy from the sun is the most abundant form of energy and its use requires advanced educational offerings for science and engineering students. Third, if Mines is to become top of mind, we must include a diverse set of energy courses, which prepare students to work on the most pressing issues of our time.</p> <p>Creation of this class as ENGY419 is necessary due to its prior offerings in Physics as PHGN419, which has programmatically lost support in the department. This currently unavailable course is referenced in 5 tracks including:</p> <ol style="list-style-type: none"> 1. BS-DSGN: BS in Design Engineering 2. MIN-PH: Minor in Physics 	

	<p>3. BS-MECH: BS in Mechanical Engineering 4. MIN-ENGY: Minor in Energy 5. BS-CHM: BS in Chemistry</p> <p>ENGY419 will create continuity for solar energy education and help to grow energy education offerings by providing suitable foundation at Mines. Has already run twice as ENGY498.</p>
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This course was initially offered in the Physics department but no longer offered. In the past few, it was offered with the Energy prefix special topics course. The instructor is a full-time photovoltaics expert at the National Renewable Energy Lab and uses his own textbook. Students take four tours including the photovoltaics lab, utility scale photovoltaics power plant, and a commercial and residential PV building. For students who are interested in solar and want to learn about it, this is the best course. \

- Question: H. Lui asked is the course offered in-person or online?
- Answer: X. Steirer answered the course is offered in-person.
- Question: R. Kaunda asked how has the previous enrollment been in the class?
- Answer: X. Steirer answered it is usually 30 students per class.
- Question: M. Barankin asked what are the prerequisites?
- Answer: X. Steirer answered the prerequisites include Physics II to ensure students know basic circuits and electromagnetism and Differential Equations (MATH225).
- Question: V. Karaivanov mentioned that PHGN419 is still showing as an active course. Shouldn't this be deactivated?
- Answer: C. Stone answered that this course probably should be deactivated. He will discuss this in the next departmental meeting.
- Question: G. Bourne asked is there a reason why it is not a 300-level course if the prerequisites for 200-level courses?
- Answer: X. Steirer answered that due to the level of software and solid-state physics knowledge needed, it should be a 400-level course. Historically, this has always been a 400-level course.
- Comment: V. Dave added that there are other 400-level courses in the catalog with only 200-level courses as prerequisites.
- Question: A. Pederson asked what would be the next class a student would take if they wanted to get into this discipline/industry?
- Answer: X. Steirer answered that it would be a graduate-level course after this class.
- Question: M. Barankin asked if this course would be cross-listed?
- Answer: X. Steirer answered that it would stay a 400-level course to ensure that the undergraduate class is good instead of cross-listing.

3. Continuing Curriculum Item(s) for Discussion

3.1

AMS		Mike Nicholas
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.
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3.2

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

Adjourn

Ventzi Karaivanov

Meeting adjourned: 5:15 pm

Next meeting: April 10, 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.