

Colorado School of Mines – UNDERGRADUATE COUNCIL MEETING MINUTES
February 14, 4:00 – 5:00 pm, via Zoom

Attendees:

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

P	Ventzi Karaivanov (chair)		Andrew Pederson (EB)	P	Mike Nicholas (AMS)	P	Chuck Stone (PH)
P	Michael Barankin (CBE)	P	Jay Straker (HASS)		Gerald Bourne (MME)	P	Rennie Kaunda (MN)
P	Dylan Domaille (CH)	P	Ge Jin (GP)		Zibo Wang (CS)	P	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)		Hisham Sager (EE)		

Other Regular Attendees and Guests

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

Special Guest(s): Christine Liebe, Sabina Schill, Susan Gieg, Malia Ann Franklin,

Welcome

Ventzi Karaivanov

Approval of Minutes – January 24, 2024

Ventzi Karaivanov

MOTION: Motion to approve previous minutes was moved by Micha and seconded by Jeff. The previous minutes were approved with 11 approved, 0 opposed, and 0 abstention.

Briefings and Information Items

Registrar’s Office

D. Scott Heath for Paul Myskiw

No updates.

TRAIL Update

Susan Gieg

I have a slideshow to update you on TRAIL. As a refresher, TRAIL is a two-part, campus-wide initiative. Part one is our experiential major menus (EMMs), which debuted in August of last year. There is one per department. If you have not seen yours for your department yet, I can share the link to them. In it, you can view the opportunities that your department has selected. The second part is our Oredigger Record of Experience (ORE) which is what we are calling our comprehensive learner record which will debut campus-wide in fall 2024. We are doing a pilot this spring with a few select departments. We are focusing on those out-of-classroom experiences and will help students make connections between what they choose to do in their time outside of the classroom and how those choices are going to impact professional development, personal development, and the learning that happens when they are not in class. ORE will serve as a verified transcript of co-curricular activities and experiences that students can take with them virtually, but they can also have a PDF file to give employers a fuller picture of learning which will not be limited to the learning that happens in a controlled classroom setting. We are trying to provide students with a way to articulate their learning experiences and the skills they gain that may make them more employable or stand out from their peers at other institutions. The ORE will look sort of like a CV but contain groups that students are involved in. Students can choose what they want to appear on it. It will also show some events that students have participated in such as the VIP symposium and different



themed areas of learning (or Ore Carts). We have competencies and definitions we have developed for each Ore Cart and so it will show the student’s progress in completing these and achieving some of these skills that we have outlined based on their participation in events and programs on campus and off campus. We want to be mindful of how we award this non-academic credit, so we are looking for input from people across campus on the definitions and competencies. There is a departmental survey we have conducted to hear what your thoughts are. We are also asking for engagement from all departments to provide current events and opportunities on the EMMs and submit any changes/updates and get your departments on the ORE. Our new software is also a great place for you to post events or programs for students. The department events survey will go out early next week. We want you to tell us about events and programs that you are already doing (not creating new events) and what you think students are learning from these opportunities. Once we collect this information, we will be able to have official recognition of your event’s impact and competencies that your students have when they participate in your event. We are also happy to help consult on how to improve your learning outcomes and enhance the learning that is coming out of these classroom activities if needed. We will have tags on OreConnect, which is the name of our software, to help events that have these learning outcomes associated with them stand out.

1 Curriculum Item(s) for Council Vote
 1.1

AMS		Mike Nicholas
CIM 12/8/23		
2 Program Changes:	BS-AMS: BS in Applied Mathematics and Statistics	
	<p>We are introducing a Data Science (DS) emphasis to go along with our Computational Applied Mathematics (CAM) and Statistics (STAT) emphases. Data Science is an important component of applied mathematics and statistics and is therefore a good fit for AMS. The emphasis overlaps in various courses with the CS track in Data Science; having this emphasis allows students the flexibility of building DS skills on a mathematics foundation rather than a CS foundation. This flexibility reflects the breadth of the field of data science. Since this emphasis relies on already existing courses, we do not anticipate a need for additional resources (beyond the resources we already need, of course).</p> <p>This also includes flowchart changes to get EB321 into the junior year.</p>	
	MINASI-AMS: Minors/ASIs in AMS – CAM and Statistics	
	<p>We have had three minors: Computational and Applied Math, Statistics, and General Math. This leads to a lot of override requests from people in one minor who are interested in courses from another. We have decided to simplify and just offer a single Applied Mathematics and Statistics Minor. Students will be able to build that minor with flexibility.</p> <p>We are also cutting the ASI. Students are not doing the ASI anyway.</p>	

MOTION: Motion to approve the BS-AMS program change by Micha and seconded by Jeff. The motion to approve the BS-AMS was approved with 13 approved, 0 opposed, and 0 abstentions.

MOTION: Motion to approve the MINASI-AMS program change by Micha and seconded by Jeff. The motion to approve MINASI-AMS program changes was approved with 13 approved, 0 opposed, and 0 abstentions.



1.2

AMS		Mike Nicholas
CIM 12/8/23		
3 Course Changes:	MATH433: Time Series and Its Applications	
	We ran this three times as a topics course. When we made the permanent course, we used 533 because it was not taken. We now need MATH433 for the undergrad, cross-listed version. We are repurposing this number, as the old MATH433 has been inactive for over a decade.	
	MATH482: Statistics Practicum (Capstone)	
	This course was moved up to 4 CHs a few years ago but still meets only 3 hours per week. We need to move it back down to 3 to be in line with the handbook.	
	MATH484: Mathematical and Computational Modeling (Capstone)	
	This course was moved up to 4 CHs a few years ago but still meets only 3 hours per week. We need to move it back down to 3 to be in line with the handbook.	

MOTION: Motion to approve the MATH433 course change by Micha and seconded by Jeff. The motion to approve the MATH433 course change was approved with 13 approved, 0 opposed, and 0 abstentions.

MOTION: Motion to approve the MATH482 course change by Micha and seconded by Jeff. The motion to approve the MATH482 course change was approved with 13 approved, 0 opposed, and 0 abstentions.

MOTION: Motion to approve the MATH484 course change by Micha and seconded by Jeff. The motion to approve the MATH484 course change was approved with 13 approved, 0 opposed, and 0 abstentions.

1.3

University Honors and Scholars Programs (HN)		Sabina Schill
CIM 12/15/23		
1 New Program:	Minor in Teaching with Licensure	
	<p>In order to provide attractive pathways for current (and future) Mines students and alumni to pursue teaching science, mathematics, and computer science as a career, we would like to create a new minor that is an update on the existing Teach@Mines Minor in Teaching and includes 24 credits rather than 18, which provides students with the option to receive the minor plus the necessary credits required for a teaching license. By offering a minor with licensure option, it will provide clear communication to the campus about the necessary coursework to meet the Colorado Department of Education requirements for initial teacher licensure.</p> <p>Creating an opportunity for Mines students to become highly-qualified and licensed science, math, and computer science teachers addresses the heart of the Mines@150 goals. Bringing students with technical backgrounds into our local classrooms allows these students to share their passion in a way that meets societal needs and at the same time builds their leadership and communication skills. Providing an option for Mines students to pursue teaching as a career will increase retention and recruitment, both by bringing in and retaining those who decide they want to teach as well as by placing informed Mines ambassadors into K-12 classrooms which will create a better prepared and larger candidate</p>	



	pool for the next generation of Mines incoming students.
	The coursework for this program is delivered both online and in person with a substantial K-12 classroom component.

MOTION: Motion to approve the Minor in Teaching with Licensure program by Micha and seconded by Jeff. The motion to approve the Minor in Teaching with Licensure program was approved with 12 approved, 0 opposed, and 0 abstentions.

1.4

University Honors and Scholars Programs (HN)		Sabina Schill
CIM 12/15/23		
1 Program Change:	MIN-TEACH: Minor in Teaching	
	<p>Creating an opportunity for Mines students to become highly-qualified science, engineering, mathematics, computer science, or STEM teachers lies at the heart of the Mines@150 goals. Providing an option for Mines students to pursue teaching as a career will increase retention and recruitment, both by bringing in and retaining those who decide they want to teach as well as by placing informed Mines ambassadors into K-12 classrooms.</p> <p>Updates to the Teaching Minor are: 1) The addition of Computer Science Education courses under the new course prefix CSED, which will provide clarity for students who choose to pursue a teaching minor and are focused on Computer Science. 2) The addition of more options for the required Capstone I course, which will provide students in the minor options for engaging in classroom teaching focused within their STEM discipline of choice: Science (SCED464), Math (MAED464), or Computer Science (CSED464).</p>	

MOTION: Motion to approve the MIN-TEACH program change by Micha and seconded by Jeff. The motion to approve the MIN-TEACH program change was approved with 13 approved, 0 opposed, and 0 abstentions.

1.5

HN		Sabina Schill
CIM 12/12/23		
4 New Course:	CSED430: Computer Science Practices and Technological Impacts on Society	
	<p>Providing Computer Science Teacher Education aligns with Mines@150 goals to produce differentiated and highly desired STEM education leaders and to become a leader in educating STEM students and professionals. Computer Science (CS) professionals are the most needed STEM professional in the workplace. Engineers, scientists, and mathematicians who know CS will be able to provide more effective expertise. Currently, Mines leads in Colorado innovatively providing needed pre-service teacher training for CS teacher educators. CS teachers with Mines degrees will be more likely to encourage</p>	



	<p>students to attend Mines, creating a pipeline of students for the second most popular degree at Mines, CS. The proposed course will assist future CS teachers and engineers applying CS to understand the ethical implications of optimal and poor code. Students will also develop strategies to include ethical discussions in the software or engineering design cycle, as well as teach K-12 students CS professional practices and ethics.</p> <p>This is a residential course, meeting in-person 3 times each week.</p>
	CSED435: Computer Science Teaching Techniques
	<p>As a new pre-service Teach@Mines course for undergraduate students, CS Teaching Techniques aligns with Mines@150 plans regarding being an innovative STEM education leader, top of mind university, developing graduates who will have a profound and innovative impact on society. Currently, Mines offers the only CS undergraduate pre-service teacher licensure program in Colorado and one of the only programs nationally. In Colorado and nationally, an estimated 40 – 60% of all K-12 students have access to CS education. Our CS majors who pursue a Teaching minor with a focus on CS will be able to earn CS teaching licensure and also be academically qualified to teach K-12 math, science, and engineering.</p> <p>This is a residential course, meeting in-person 1 time each week.</p>
	CSED464: Capstone Curriculum Design I - Practicum
	<p>Creating an opportunity for Mines students to become highly-qualified science, engineering, math, computer science or STEM teachers lies at the heart of the Mines@150 goals. Bringing students with technical backgrounds into our local classrooms allows these students to share their passion in a way that meets societal needs and at the same time builds their leadership and communication skills. Providing an option for Mines students to pursue teaching as a career will increase retention and recruitment, both by bringing in and retaining those who decide they want to teach as well as by placing informed Mines ambassadors into K-12 classrooms. Additionally, these courses are attractive to career changers who are looking to transition from technical careers into the teaching profession. This course is face-to-face so that students may experience the classroom firsthand.</p>
	CSED465: Capstone Curriculum Design II – Student Teaching
	<p>Creating an opportunity for Mines students to become highly-qualified science, engineering, mathematics, computer science, or STEM teachers lies at the heart of the Mines@150 goals. Bringing students with technical backgrounds into our local classrooms allows these students to share their passion in a way that meets societal needs and at the same time builds their leadership and communication skills. Providing an option for Mines students to pursue teaching as a career will increase retention and recruitment, both by bringing in and retaining those who decide they want to teach as well as by placing informed Mines ambassadors into K-12 classrooms. This course is face-to-face so that students may experience the classroom firsthand.</p>

Question: Did we find a good way to solve the issue of CSED and SCED prefixes and avoid confusion for the students?

Answer: We recognize that those can be confusing. However, when we talk to students, we typically say science education or computer science education (which is normally abbreviated to CS). It will be on us as we go through advising to carefully remind our students to sign up for the correct courses and we in are in the practice of following up with students during advising week after they sign up for courses to ensure they sign up for what they consulted us with and that they are the track they need to be.

MOTION: Motion to approve CSED430 by Micha and seconded by Jeff. The motion to approve CSED430 was approved with 12 approved, 0 opposed, and 1 abstention.

MOTION: Motion to approve CSED435 by Micha and seconded by Jeff. The motion to approve CSED435 was approved with 12 approved, 0 opposed, and 1 abstention.

MOTION: Motion to approve CSED464 by Micha and seconded by Jeff. The motion to approve CSED464 was approved with 12 approved, 0 opposed, and 1 abstention.

MOTION: Motion to approve CSED465 by Micha and seconded by Jeff. The motion to approve CSED465 was approved with 12 approved, 0 opposed, and 1 abstention.

1.6

HN		Sabina Schill
CIM 12/12/23		
1 Course Deactivation:	MAED435: Computer Science Teaching Techniques	
	We are also proposing some new Computer Science Education (CSED) courses that are currently being taught under the Math Science Education (MAED) course prefix. We are simply aiming to separate Computer Science from Math via a new course code prefix.	

MOTION: Motion to approve MAED435 course deactivation by Micha and seconded by Jeff. The motion to approve MAED435 course deactivation was approved with 13 approved, 0 opposed, and 0 abstentions.

1.7

HN		Sabina Schill
CIM 12/12/23		
2 Course Change:	MAED464: Capstone Curriculum Design I	
	Updating pre- and co-requisites so that they match across T&M Capstone courses in SCED, MAED, and CSED. Additionally, the original pre- and co-requisites anticipated students progressing through courses in a linear fashion; however, many students organize their schedules to take multiple T&M courses at once. These new pre- and co-requisites provide more flexibility to students to complete the courses in a way that fits their schedules and remain accurate as to the expected prior knowledge students need for these courses.	
	MAED465: Capstone Curriculum Design II	
	Updating pre- and co-requisites so that they match across T&M Capstone courses in SCED, MAED, and CSED. Additionally, the original pre- and co-requisites anticipated students progressing through courses in a linear fashion; however, many students organize their schedules to take multiple T&M courses at once. These new pre- and co-requisites provide more flexibility to students to complete the courses in a way that fits their schedules and remain accurate as to the expected prior knowledge students need for these courses.	

MOTION: Motion to approve MAED464 course change by Micha and seconded by Jeff. The motion to approve MAED464 course change was approved with 13 approved, 0 opposed, and 0 abstentions.

MOTION: Motion to approve MAED465 course change by Micha and seconded by Jeff. The motion to approve MAED465 course change was approved with 13 approved, 0 opposed, and 0 abstentions.

1.8

HN		Sabina Schill
CIM 12/12/23		
2 Course Change:	SCED464: Capstone Curriculum Design I	
	Updating pre- and co-requisites so that they match across T&M Capstone courses in SCED, MAED, and CSED. Additionally, the original pre- and co-requisites anticipated students progressing through courses in a linear fashion; however, many students organize their schedules to take multiple T&M courses at once. These new pre- and co-requisites provide more flexibility to students to complete the courses in a way that fits their schedules and remain accurate as to the expected prior knowledge students need for these courses.	
	SCED465: Capstone Curriculum Design II	
	Updating pre- and co-requisites so that they match across T&M Capstone courses in SCED, MAED, and CSED. Additionally, the original pre- and co-requisites anticipated students progressing through courses in a linear fashion; however, many students organize their schedules to take multiple T&M courses at once. These new pre- and co-requisites provide more flexibility to students to complete the courses in a way that fits their schedules and remain accurate as to the expected prior knowledge students need for these courses.	

MOTION: Motion to approve SCED464 course change by Micha and seconded by Jeff. The motion to approve SCED464 course change was approved with 12 approved, 0 opposed, and 1 abstention.

MOTION: Motion to approve SCED465 course change by Micha and seconded by Jeff. The motion to approve SCED465 course change was approved with 12 approved, 0 opposed, and 1 abstention.

1.9

CSM		Colin Terry
CIM 12/11/23		
1 New Course:	CSM301: Introduction to Public Speaking & Communication Skills	
	This new course - taught and facilitated through the Vallejo Irvine Program for Professional Development (VIP) - advances Mines aspiration to equip all graduating students with the necessary professional readiness competencies to positively distinguish themselves in their professional and graduate pursuits. This course introduces students to fundamental public speaking and verbal communications skills and advances Mines' commitment to professional development.	

MOTION: Motion to approve CSM301 by Micha and seconded by Jeff. The motion to approve CSM301 was approved with 12 approved, 0 opposed, and 1 abstention.

1.10

CS	Zibo Wang/ Christine Liebe
CIM 12/13/23	
1 Course Change:	CSCI128: Computer Science for STEM
	<p>This online course is considered part of the new Mines Core, and thus designated an essential class for all students studying at Mines. Increasingly each year, our society relies on computing technology to accomplish daily tasks. This is even more true for scientists and engineers in STEM fields. However, simply knowing how to use computers is not enough. Capable professionals must also know how to program computers to make the best use of them. This course will teach the basics of computer programming, targeting students with no prior experience. It will teach fundamentals that are necessary to program in any language, as well as data analysis techniques that will be applicable to all STEM students, regardless of their intended major.</p> <p>OL version: Liebe completed FOCD in Spring 2021. We expect the online CSCI128 version to be completed in April 2024 for the Summer 2024 semester. We plan to offer the course on June 24, 2024 as an 8-week version. We would like the course to be open for registration in April or early May.</p>

Question: Are you still planning to offer this online course over the summer?

Answer: Yes, we are.

MOTION: Motion to approve CSCI128 course change by Micha and seconded by Jeff. The motion to approve CSCI128 course change was approved with 12 approved, 0 opposed, and 0 abstentions.

1.11

EBGN	Andrew Pederson
CIM 1/3/24	
1 New Course:	EBGN309: FUNDAMENTALS OF MANAGEMENT
	<p>This course will be a required course in the BEMS degree program, as well as an elective course for the Economics degree and Business & Entrepreneurship minor. Part of EB's continued effort to offer more business courses, and this fills a hole in the current curriculum.</p> <p>Catalog: This course provides a survey of fundamental principles of management and their application to the operations of a complex, modern organization. Topics covered include managerial functions (planning, organizing, leading, and controlling) as well as organizational behavior, human resources, and operations management.</p>

Question: Under INNO, we have an Intro to Entrepreneurship class. We want to make sure we are not duplicate efforts and that things are clear to students.

Answer: To clarify, this is an existing minor in Business and Entrepreneurship and they are just editing electives.

MOTION: Motion to approve EBGN309 by Micha and seconded by Jeff. The motion to approve EBGN309 was approved with 12 approved, 0 opposed, and 0 abstentions.

1.12

EBGN		Andrew Pederson
CIM 1/3/24		
1 Program Change:	MIN-BUEN: Minor in Business and Entrepreneurship	
	Editing the list of electives for the minor due to course additions and subtractions, and changing the requirement for EBGN201 and replacing that requirement with EBGN360, Introduction to Entrepreneurship.	

MOTION: Motion to approve MIN-BUEN program change by Micha and seconded by Jeff. The motion to approve MIN-BUEN program change was approved with 12 approved, 0 opposed, and 0 abstentions.

1.13

EBGN		Andrew Pederson
CIM 1/3/24		
1 Program Change:	BS-BEMS : BS in Business Engineering and Management Science	
	This version includes the change that was passed F23 to require EBGN201. This version also includes a program change adding a Management course to the Business core, reducing the tracks by 3CH each, and increasing Free Electives from 9-12.	

MOTION: Motion to approve BS-BEMS program change by Micha and seconded by Jeff. The motion to approve BS-BEMS program change was approved with 12 approved, 0 opposed, and 0 abstentions.

1.14

EE		Hisham Sager
CIM 1/3/24		
1 Program Change:	BS-EE: BS IN ELECTRICAL ENGINEERING	
	Adding language about approval to count EE graduate courses as undergraduate EE electives. Clarifying language for the combined program.	

MOTION: Motion to approve BS-EE program change by Micha and seconded by Jeff. The motion to approve CS was approved with 12 approved, 0 opposed, and 0 abstentions.

1.15

CEE		Hongyan Liu
CIM 1/9/24		
2 Course Deactivations:	CEEN441: INTRODUCTION TO THE SEISMIC DESIGN OF STRUCTURES	
	Cross-list with graduate course, so need new numbers. I was instructed to deactivate this course and propose a new course for Seismic Design.	
	CEEN446: STRUCTURAL LOADS	
	Cross-list with graduate course and need a new number. I was instructed to deactivate this course and propose a new course for Structural Loads.	

1.16

CEE		Hongyan Liu
CIM 1/9/24		
2 New Courses:	CEEN449: INTRODUCTION TO THE SEISMIC DESIGN OF STRUCTURES	
	Mines need to have a viable MS program in structural engineering. This class will be cross-listed with CEEN 549, which has the same name. Originally graduate students can take CEEN441 to count towards their MS and PhD degree, but now that is not allowed. Thus, this class need to have a 5XX level cross listing component.	
	CEEN448: STRUCTURAL LOADS	
	Structural Engineers will learn about various loads and how they are applied to buildings. Many graduate students took "CEEN446: Structural Loads" as part of their degree requirements. A graduate level course is proposed that builds off this undergraduate offering.	

MOTION: Motion to approve CEEN441 deactivation/CEEN449 new course by Micha and seconded by Jeff. The motion to approve CEEN441 deactivation/CEEN449 new course was approved with 13 approved, 0 opposed, and 0 abstentions.

MOTION: Motion to approve CEEN446 deactivation/CEEN448 new course by Micha and seconded by Jeff. The motion to approve CEEN446 deactivation/CEEN448 new course was approved with 12 approved, 0 opposed, and 0 abstentions.

4:30-4:50 pm

2. New Curriculum Item(s)

2.1

CSM General		Vibhuti Dave
CIM 2/1		
1 program change:	CORE: Core Curriculum	
	Improvements, corrections, and additions to Catalog language	

The following are changes that are happening to the Core Curriculum page in the catalog. CSM102, Introduction to Technical Writing, which was approved by Faculty Senate, will be one of the Success & Wellness electives. You will see that as an addition to the Core Curriculum page along with CSM301 which was just approved by the council today. We would also like to introduce language around advising guidelines for the change that happened late last academic year in terms of removing EBG201 as a core requirement and adding EBG321. Currently, there are advising guidelines for CS and Success and Wellness in the appendix if you scroll down to the bottom of the Core Curriculum page. We would like to have similar advising guidelines for EB to have documentation and make sure students are aware of what their options are if they have taken 201 and want to change catalogs. This has been run by the EB department and they are on board with the change. Students who have completed EBG201 and want to switch to a new catalog will still need to take 321. 201 will not automatically substitute for 321. That is something that we need to document so that students are aware and can make an informed decision as far as whether they want to switch catalogs or not. To reiterate, if a student has taken 201, they can do nothing and stay on the old catalog. If they want to switch catalogs, they need to complete 321 and have 201 count as a mid-level CAS or free elective.

Question: Is the EBG301 that was just passed an elective and not a core requirement?

Answer: Correct. It is not a core curricular requirement, but it is an elective that students can take to complete the Success & Wellness requirement.

2.2

Computer Science		Zibo Wang
CIM 1/22		
1 program change:	BS-CS: BS IN COMPUTER SCIENCE	
	<p>- All tracks: Added CSED435 and INNO444 to 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>	

2.3

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	
	<p>Cross-list with graduate course CEEN593.</p> <p>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'</p>	

	mission, vision and strategic plan.
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This change is cleaning up courses and putting this course in the right category. 70s are the water side instead of the other topics so we are moving this course to CEEN493 and cross-listed with CEEN593.

Minor Change – to be considered as a single vote

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

4:50-5:00 pm

3. Continuing Curriculum Item(s) for Discussion

3.1

Electrical Engineering		Hisham Sager
CIM 1/3/24		
4 Course Change:	EENG307: INTRODUCTION TO FEEDBACK CONTROL SYSTEMS	
	Adding Honors Differential Equations to prerequisites.	
	EENG310: INFORMATION SYSTEMS SCIENCE I	
	Adding Honors Differential Equations to prerequisites.	
	EENG386: FUNDAMENTALS OF ENGINEERING ELECTROMAGNETICS	
	Adding Honors Differential Equations to prerequisites.	
	EENG437: INTRODUCTION TO COMPUTER VISION	
	Updating modality to both in-person and online.	

3.2

CBE		Michael Barankin
CIM 1/17/24		
1 New Course:	CBEN424: COMPUTER-AIDED PROCESS SIMULATION	
	This course will add an elective to our UG program which already exists in the G program (but has not been offered in many years), and enable undergrads to take a course along with grad and certificate students. This course has direct applications in industry.	

3.3

CEE		Hongyan Liu
CIM 1/11		
1 Course	CEEN471: WATER AND WASTEWATER TREATMENT SYSTEMS	

Deactivation:	ANALYSIS AND DESIGN
	Changed this course number to CEEN478 to cross-list with CEEN578.
1 New Course:	CEEN478: WATER TREATMENT DESIGN AND ANALYSIS
	This is not a new course; I am attempting to change the course number of CEEN 471 to CEEN 478 which necessitates this form. The course educates students on advanced aspects of water treatment engineering with a focus on system design. Students will learn core aspects of water system design enabling success in industry.

3.4

EDNS		Jack Bringardner
CIM 1/11/24		
1 Course Change:	EDNS251: CORNERSTONE DESIGN II	
	This change is part of the revitalization of Cornerstone Design II to align with Mines@150 and the integration of business acumen into the curriculum. The course description addresses the inclusion of some introductory business tools in the real-world client-sponsored student team projects. Discipline specific versions of EDNS251. Corresponding to the EDNS26X courses, will be deactivated. Prerequisite changes include removing EDNS192, a course no longer offered, and adding HNRS120 to recognize both honors tracks that satisfy EDNS151 and NHV.	
8 Course Deactivations:	EDNS261: DESIGN II: GIS	
	This change is part of the revitalization of Cornerstone Design II to align with Mines@150 and the integration of business acumen into the curriculum. Discipline specific versions of EDNS 251, corresponding to the EDNS 26X courses, will be deactivated.	
	EDNS262: DESIGN II: AUTOCAD	
	This change is part of the revitalization of Cornerstone Design II to align with Mines@150 and the integration of business acumen into the curriculum. Discipline specific versions of EDNS 251, corresponding to the EDNS 26X courses, will be deactivated.	
	EDNS263: DESIGN II: MATERIALS	
	This change is part of the revitalization of Cornerstone Design II to align with Mines@150 and the integration of business acumen into the curriculum. Discipline specific versions of EDNS 251, corresponding to the EDNS 26X courses, will be deactivated.	
	EDNS264: DESIGN II: GEOLOGY GIS	
	This change is part of the revitalization of Cornerstone Design II to align with Mines@150 and the integration of business acumen into the curriculum. Discipline specific versions of EDNS 251, corresponding to the EDNS 26X courses, will be deactivated.	
	EDNS269: DESIGN II: ENGINEERING PHYSICS	
	This change is part of the revitalization of Cornerstone Design II to align with Mines@150 and the integration of business acumen into the curriculum. Discipline specific versions of EDNS 251, corresponding to the EDNS 26X courses, will be deactivated.	
	EDNS325: CULTURAL ANTHROPOLOGY	

	Mines Faculty Senate Fall 2023 request to deactivate courses no longer offered.
	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: I am here to reiterate what I posted two years ago when this was proposed for removal. We managed to save it by moving it to EDNS. I would appreciate it if we could find another way to offer anthropology courses to our students. I know students get a lot out of these courses, especially engineering students. These courses are not being removed for low enrollment (extra seat booked in 2020 and only six seats available in 2018).

Comment: I will share what was written up with our department. When I followed up initially, the response was that the content is not being removed from the curriculum, but that the content is being delivered elsewhere in different courses as a strategic goal of what the undergraduate and graduate programs aim to accomplish. Rather than being a straightforward cultural anthropology course, the concepts are integrated into some of the design-based and community-based practice curriculum that exists in other 300 and 400-level EDNS courses through project-based topics.

3.5

MECH		Jeff Wheeler
CIM 1/11/24		
1 Course Deactivation:	MEGN361: THERMODYNAMICS I	
	Changing the course number to MEGN 261 to reflect that this is a sophomore level class. The new MEGN 261 is already proposed in CIM. per Dr. Jeffrey Wheeler 01/11/2024 - rlb	
1 New Course:	MEGN261: THERMODYNAMICS I	
	This is a course number change proposal. This new course proposal should be considered one change with the MEGN 361 deactivation. This is a sophomore level course and ME students are advised to take it in their section year. A 261 course number establishes the expectation that this is a sophomore class.	
1 Course Deactivation:	MEGN458: INTRO TO SPACE EXPLORATION AND RESOURCES	
	This is a course number change. Deactivate MEGN 458 and replace with MEGN 452 . Intro to Space Exploration is the first course in a series but currently has the highest course number of those classes. The new course number will convey that this is the start of a sequence	
1 New Course:	MEGN452: INTRO TO SPACE EXPLORATION AND RESOURCES	
	This is a course number change. Deactivate MEGN 458 and replace with MEGN 452 . Intro to Space Exploration is the first course in a series but currently has the highest course number of those classes. The new course number will convey that this is the start of a sequence	
1 Course Change:	MEGN441: INTRODUCTION TO ROBOTICS	
	EEGN307 recommended but not required as a prerequisite per the course instructors. Added clarification to show that one programming course (MEGN200, CSCI200, or CSCI261) and one circuits course (EEGN281,	

	EEGN282, or PHGN215) are required as prerequisites.
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3.6

CS		Zibo Wang
CIM 1/18/24		
10 Course Changes:	CSCI220: DATA STRUCTURES AND ALGORITHMS	
	Updating learning outcome language.	
	CSCI303: INTRODUCTION TO DATA SCIENCE	
	Cleaning up prerequisites – CSCI128 is the necessary prerequisite. Currently leaving CSCI101 for historical/existing students.	
	CSCI404: ARTIFICIAL INTELLIGENCE	
	Prerequisite update: Adding MATH201 or MATH334 for flexibility.	
	CSCI425: COMPILER DESIGN	
	Cleaning up prerequisites – Removing explicit CSCI210 prerequisite since it is already a prerequisite for both CSCI306 and CSCI341.	
	CSCI432: ROBOT ETHICS	
	Downgrading prerequisites from CSCI220 to CSCI200	
	CSCI437: INTRODUCTION TO COMPUTER VISION	
	Updating modality.	
	CSCI442: OPERATING SYSTEMS	
	Cleaning up prerequisites – Removing CSCI210 as an explicit prerequisite since it is already a prerequisite for CSCI341.	
	CSCI470: INTRODUCTION TO MACHINE LEARNING	
	Updating prerequisites for added flexibility.	
	CSCI475: INFORMATION SECURITY AND PRIVACY	
	Prerequisite update; Adding new CSCI210 as alternative to CSCI274.	
	CSCI478: INTRODUCTION TO BIOINFORMATICS	
	Cleaning up prerequisites – CSCI128 is the necessary prerequisite. Currently leaving CSCI101 for historical/existing students.	

3.7

MT	Metallurgical & Materials Engineering (MT)	Gerald Bourne
CIM 1/19/24		

1 New Course:	MTGN480: ADVANCED WELDING METALLURGY
	<p>Very few institutions offer welding metallurgy courses at all, and even fewer offer courses focused on microstructure and property prediction of welds. By offering this course, Mines will be top of mind for students interested in welding and additive manufacturing related careers after graduation. The Metallurgical and Materials Engineering department has thematic strengths in welding and additive manufacturing, and this course supports those areas, which also improves the scale and impact of Mines in these focus areas.</p> <p>This course will explore microstructural development that occurs during welding. Solidification in the fusion zone as well as solid-state microstructural changes in the heat affected zone will be discussed. We will use the understanding of microstructural changes during welding to interpret cracking mechanisms and unique behaviors of specific alloy systems. The interrelationship between modeling/simulation and experiments will be emphasized. Throughout the course, we will think about how the people to who actually weld (welders) can provide critical insight to solve welding metallurgy problems.</p>

Minor Changes – to be considered as a single vote

Vote on 2/28, should have voted on 2/14

CBE		Michael Barankin
CIM 11/16		
1 Course Change:	CBEN472: INTRODUCTION TO ENERGY TECHNOLOGIES	
	Semester varies	

Electrical Engineering		Hisham Sager
CIM 1/3/24		
1 Course Change:	EENG391: FE ON COMPUTATIONAL FUNDAMENTALS OF ENGINEERING ELECTROMAGNETICS	
	Adding Honors Differential Equations to prerequisites.	

5. Adjourn

Meeting adjourned: 5:03 pm.

Next meeting: February 28, 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.