

Colorado School of Mines – GRADUATE COUNCIL MEETING MINUTES
 March 2, 4:00 – 5:00 pm, via Zoom

Attendees:

Voting Members: 22 total (12 - majority needed for quorum). Quorum was present

P	Bettina Voelker (Chair)	P	Christine Baker (LB)	P	Andy Osborne (NSE)	P	Owen Hildreth (ME)
P	Eric Anderson (HSE)	P	Karin Leiderman (AMS)	A	Jamal Rostami (MN)	P	Michael Heeley (EB)
P	Ebru Bozdag (GP)	P	Juan Lucena (EDS)	A	Jim Ranville (GC)	A	Luis Zerpa (PE)
P	Geoff Brennecka (ML)	P	Zhexuan Gong (PH)	P	Danica Roth (GE)	P	Qi Han (CS)
P	Elizabeth Davis (HASS)	P	Dave Marr (CBE)	P	Maxwell Silver (GSG)	P	Lori Tunstall (UCTE / CEE)
P	Christine Morrison (CH)	A	Salman Mohagheghi (EE)				

Other Regular Attendees and Guests

P	Tim Barbari (OGS)	P	Carolyn Freedman (OGS)	A	Deb Jordan (Trefny)	P	Mara Green (AA)
A	Jennie Kenney (AA)	A	Denise Winn-Bower (PE)	P	Paul Myskiw (RO)	P	Kendra Stansbury (RO)

Special Guest(s): Tony Petrella (ME)

Welcome

Tina Voelker

Briefings and Information Items

Office of Graduate Studies

Tim Barbari

Thesis Committee Review

Barbari recalled the formation of a subcommittee intended to review the thesis committee form and its alignment with what has been listed in the Catalog; materials have been gathered and were sent out for review.

Western Interstate Commission for Higher Education (WICHE)

All graduate certificates and non-thesis masters programs have been moved into the WICHE program to allow students from these states to receive a reduction in tuition. All programs in WICHE will be at 150% of the Colorado Resident Tuition for 2023. Councilors encouraged to bring this to advisors and programs. A template for the SLATE message can be requested from OGS.

- **Question** regarding online programs; WICHE does not include online programs. Online has a different rate per credit regardless of non-resident or resident status.
- **Question** on WICHE requiring unique programs in order to qualify; Barbari reported that this criterion for unique program status has been dropped. WICHE allows for provision of a discount similar to a scholarship in the region of the country where several non-thesis masters students come from.
- **Question** if the institution will lose money with WICHE and high tuition rates; a breakeven number was provided by the budget regarding non-thesis masters projections, upper leadership agreed on WICHE as opposed to lower tuition. One advantage is the number of international students willing to pay the full, non-resident tuition.
- **Question** on thesis masters programs in WICHE; Barbari noted thesis masters programs' housing funded and non-funded students and would make the WICHE process messier. WICHE at Mines is being tested for 2023.
- **Question** on individual programs' choice to be a part of WICHE; an institutional multiplier must be present on the resident tuition (100%-200%), programs that did not qualify for WICHE in the

past will remain grandfathered in for the 22-23 admission year and will be at 150% for the 23-23 admission year.

- **Question** on the effect on return to departments; the return is on a per credit basis, the implementation of WICHE should not affect the return.
- **Question** on increase in enrollment effect on faculty; Barbari notes programs' still have the power to turn away applicants even with a different tuition rate.

Admissions has posted this change on their website. Comment made that the WICHE program may increase revenue income and having an impact on TAs stipend rates; feedback received from TAs on overload with an increase in admittance.

Registrar's Office

Paul Myskiw

Residency

Councilors asked to remind first-year, non-resident graduate students to make sure obligations to demonstrate Colorado residency are being met. Additional communications will be sent in June to first- and second-year graduate students. The deadline will be adhered to more stringently in the Fall.

Barbari noted that graduate students from one of the sixteen Western Regional Graduate Program (WRGP) states cannot seek residency as the WICHE discount is already applied. Current students that may take more than two years to complete a program are encouraged to drop the WICHE tuition rate and apply for residency.

Suspending vs Deactivating Programs

Faculty Senate discussed deactivation versus suspension of a program and what constitutes the need for either process. Mines does not have a formal policy on the suspension of programs; Myskiw encouraged Councilors to consider the creation of a policy. Suspension of a program, currently, removes the program from the Catalog and the admissions application and can be reactivated at a later time.

Graduate Student Government

Maxwell Silver

GSG and Undergraduate Student Government (USG) hosted two mornings of faculty and staff appreciation through breakfast and brunches; there was a large turnout and GSG had decided to continue this moving forward.

Councilor noted if there are students impacted by the events in Ukraine, Derek Morgan has encouraged students to reach out regarding needs or accommodations throughout their studies.

Curriculum Item(s) for Vote – from 2/2/22

1.1

MECHANICAL ENGINEERING

Owen Hildreth

[CIM 2/1]

1 program change: CERTMS-ADVMAN: CERT & MS – Additive Manufacturing
Changing the name of the MSNT program to Additive Manufacturing as recommended by advisory committee and in keeping with student feedback and interest.
Revising the MSNT Core Courses to reflect the focus on Additive Manufacturing.

MOTION: To approve the program change in Mechanical Engineering to CERTMS-ADVMAN: CERT & MS – Additive Manufacturing by Hildreth, seconded by Brennecka. Motion passed unanimously.

1.2 **GEOPHYSICS** Ge Jin
[CIM 1/25; Provost 1/25]
1 new course: GPGN545: INTRODUCTION TO DISTRIBUTED FIBER-OPTIC SENSING AND ITS APPLICATIONS
Distributed fiber optic sensing has become more and more important in the field of Geophysics, both in fundamental research and in the industry. This course will introduce this new technology to the students and demonstrate its applications through realistic field case studies. This course will be offered online as part of the petroleum geophysics certificate program.

1.2.1 [CIM 1/25] Jeffrey Shragge
1 course change: GPGN590: INSTRUMENTAL DESIGN IN APPLIED GEOSCIENCES
- Previous instructor departed Mines
- Expanding instrumentation applications from geophysics to more broadly geosciences
- Course now more welcoming to students in applied geoscience and related engineering disciplines, including environmental, civil, electrical, mining, petroleum, and mechanical engineering.

MOTION: To approve the program change in Mechanical Engineering to CERTMS-ADVMAN: CERT & MS – Additive Manufacturing by Brennecka, seconded by Morrison. Motion passed unanimously.

1.3 **PETROLEUM ENGINEERING** Luis Zerpa
[CIM 1/31]
1 program deactivation: MP-PMPRS: Professional Masters in Petroleum Reservoir Systems
The Professional Masters in Petroleum Reservoir Systems is recommended to be sun-setted. The program has attracted low applicant numbers primarily because the Petroleum industry does not generally support the Professional Masters degree. Also, while the Professional Masters program was intended for working professionals, many of the applicants are not employed and those who enroll generally want to convert to a thesis-based MS once they begin the program. Due to the low enrollment in the program, the required classes draw low registration.
The participating departments, Geology and Geological Engineering, Geophysics and Petroleum Engineering are all in agreement on the sun-setting of the program. Currently enrolled students (4) will be supported until the completion of their program.

MOTION: To approve the program change in Mechanical Engineering to CERTMS-ADVMAN: CERT & MS – Additive Manufacturing by Brennecka, seconded by Morrison. Motion passed unanimously.

New Curriculum Item(s)

2.1 **ECONOMICS & BUSINESS** Michael Heeley
Tim Barbari
[CIM 2/17]
1 program change: MSPHD-ECO: MS & PhD – Mineral & Energy Economics
Adding language to the program to encourage applicants to the Mineral and Energy

Economics (MEE) program by facilitating applications from Western Colorado University's Bachelors of Energy Management program. The program will allow these students to complete the non-thesis Masters in MEE in one year by setting specific course requirements at Western Colorado University.

The program change had been brought to Council in the past, but concern was raised regarding the 4+1 language being in line with Mines' Catalog language.

The proposed change has been completed following discussion and review of the Catalog. Mines and Western Colorado University have signed an MOU; there is an institutional commitment to the 4+1 program. The program has not changed; the description has been updated and the courses between the institutions have been laid out to be in-line with the Catalog.

2.2 **MECHANICAL ENGINEERING**
[CIM 2/16]

Tony Petrella

1 program change: MSPHD-MECH: MS & PhD – Mechanical Engineering
Adding Online Modality to support an Online Mechanical Engineering Masters Non-Thesis degree. Actual start date would be Spring 2023, but not available as an option for the drop-down menu.

The program requirements will not change; existing courses have been proposed with an online modality. Petrella noted the change is not intended as a replacement to face-to-face sections but to provide an online section for students to satisfy existing requirements of the non-thesis masters degree.

- **Question** on residential students' ability to mix-and-match online courses and residential courses; Petrella stated the modality change is targeted at working professionals and a demographic of students that are not on campus but restraints will not be placed on residential students taking these online courses. There may be a future in which online courses are restricted to students in the online program only.
- **Question** on term length; all online courses will be eight weeks.
- **Question** on the course demographic and a mix between working professionals and residential students; this could be possible.
- **Question** on marketing the degree or online courses; Petrella noted there has been constant communication with Mines Online, John Bradford, partnership with Jason Hughes' team in marketing communications. ME offers several online credentials and has experience in advertising these programs.

Comment made on issues in advertising and opening online programs to residential students, students had raised concerns on eight-week courses and had believed the courses should be sixteen weeks. Comment raised on working professionals experiencing issues with the rigor of an eight-week course.

Petrella noted that in addition to more rigorous 500-level courses there is at least one 400-level to serve as an introduction; Petrella also remarked that one 400-level course remains in high demand with undergraduate students and the online section was added to avoid making the whole course an online experience.

Comment made on the eight-week structure due to retention; working professionals and part-time students can experience a challenge completing a two-year program at such intensity.

New Business

Green noted the Faculty Senate Distinguished Lecture series will take place on March 16, 2022 from 4:00-5:00 pm in the Student Center Grand Ballrooms.

Adjourn

Tina Voelker

Meeting adjourned: 5:02 pm.

Next meeting: March 16, 4:00-5:00 pm via Zoom.

Consent Agenda The following proposals will not be discussed unless specifically requested by Council. Please review the following items. With no objections, approval is implied and items will be processed accordingly.

3.1 **Approval of Minutes** – February 16, 2022

Tina Voelker

3.2 **CIVIL & ENVIRONMENTAL ENGINEERING**

Kimberly Brock

[CIM 2/18]

5 course changes: CEEN540: ADVANCED DESIGN OF STEEL STRUCTURES
CEEN541: DESIGN OF REINFORCED CONCRETE STRUCTURES II
CEEN547: DESIGN OF PRESTRESSED CONCRETE STRUCTURES
Course offering updated in Catalog description: “Course offered every third semester”.
CEEN542: TIMBER AND MASONRY DESIGN

Course offering updated in Catalog description: “(II)”.

CEEN545: STEEL BRIDGE DESIGN

Course offering updated in Catalog description: removal of “(I,II,S)” and addition of “Course offered every third semester”.

3.2.1 **3 course deactivations:** CEEN571L: ADVANCED WATER TREATMENT ENGINEERING AND WATER REUSE – LABORATORY
CEEN575L: HAZARDOUS WASTE SITE REMEDIATION TREATABILITY TESTING

Lab is no longer offered.

CEEN576: POLLUTION PREVENTION: FUNDAMENTALS AND PRACTICE

Course is no longer offered.

3.3 **ELECTRICAL ENGINEERING**

Taylor Hase

[CIM 2/18]

1 program change: MPSHD-EE: MS & PhD – Electrical Engineering
Updating “EPSE” track to “PES”, Power and Energy Systems.

3.3.1 **9 course changes:** EENG509: SPARSE SIGNAL PROCESSING

Updating course description to better describe course. Added “or instructor consent” to prerequisites.

EENG515: MATHEMATICAL METHODS FOR SIGNALS AND SYSTEMS

Updated course description to better describe course.

EENG571: MODERN ADJUSTABLE SPEED ELECTRIC DRIVES

Offered on demand in Spring semesters; added note in course description.

EENG572: RENEWABLE ENERGY AND DISTRIBUTED GENERATION

Added note about course being offered on demand in spring semesters.

EENG577: ADVANCED ELECTRICAL MACHINE DYNAMICS FOR SMART-GRID SYSTEMS

Added prerequisites "EENG389 and EENG470" to better prepare students for course.

EENG580: POWER DISTRIBUTION SYSTEMS ENGINEERING

Clarified when course is offered: "offered in fall semester of odd years".

EENG582: HIGH VOLTAGE AC AND DC POWER TRANSMISSION

Clarified when course is offered: "offered on demand in fall semesters."

EENG587: POWER SYSTEMS PROTECTION AND RELAYING

Clarified when course is offered: "offered on demand in spring semester."

EENG588: ENERGY POLICY, RESTRUCTURING AND DEREGULATION OF ELECTRICITY MARKET

Added prerequisite: "EENG480 or instructor consent" to better prepare students for the course; clarified when course is offered: "on demand in fall semester".

3.4

MECHANICAL ENGINEERING

Owen Hildreth

[CIM 2/16]

3 course changes: MEGN511: FATIGUE AND FRACTURE
MEGN515: COMPUTATIONAL MECHANICS
MEGN566: COMBUSTION

Adding Online Modality to support an Online Mechanical Engineering Masters Non-Thesis degree. Actual start date would be Spring 2023, but not available as an option for the drop-down menu.

3.5

MINING ENGINEERING

Jürgen Brune

[CIM 2/17]

2 course changes: MNGN551: MINE ACCOUNTING
MNGN554: MINE FINANCE

Grammatical updates to the Catalog description and addition of sentence: "This is exclusively an online course that is cohort-based with limited enrollment. It is offered specifically for the Professional Masters Program in Mining Engineering and Management."

Comment made on the removal of finance-related topics from the course description of MNGN554: Mine Finance; the course content remains the same.

3.5.1

1 program change: MP-MEM: MP – Mining Engineering and Management
Minor cosmetic changes in the program.

3.6

GIS & GEOINFORMATICS

Cheryl Medford

[CIM 2/24]

1 course change: SYGN588: GIS-BASED REAL WORLD LEARNING PROJECT I – FUNDAMENTALS

To differentiate between SYGN 588 and SYGN 590 we are proposing to update the titles for the two courses to SYGN588: GIS-Based Real World Learning Project I - Fundamentals

and SYGN590: GIS-Based Real World Learning Project II – Advanced Applications. SYGN588 was moved to an On-line course as part of the non-thesis Master’s Degree in GIS, an entirely on-line degree. It was recommended by Trefny Center advisors that this be set as 2x 3 credit courses for the on-line curriculum rather than a single 6-credit course. Consequently, we propose to have two courses listed as SYGN588 and SYGN590 which are simply part A and part B for the on-line Master’s project course, GIS based Real World learning. The SYGN588 will be taught the first 8-week session of the semester and the SYGN590 will be taught the second 8-week session of the semester.

3.6.1

[CIM 2/24; Provost 2/24]

1 new course: SYGN590: GIS-BASED REAL WORLD LEARNING PROJECT II –
ADVANCED APPLICATIONS

SYGN588 was moved to an On-line course as part of the non-thesis Master’s Degree in GIS, an entirely on-line degree. It was recommended by Trefny Center advisors that this be set as 2x 3 credit courses for the on-line curriculum rather than a single 6-credit course. Consequently, we propose to have two courses listed as SYGN588 and SYGN590 which are simply part A and part B for the on-line Master’s project course, GIS based Real World learning. The SYGN588 will be taught the first 8-week session of the semester and the SYGN590 will be taught the second 8-week session of the semester. To differentiate between SYGN 588 and SYGN 590 we are proposing to update the titles for the two courses to SYGN588: GIS-Based Real World Learning Project I - Fundamentals and SYGN590: GIS-Based Real World Learning Project II - Advanced Applications.

3.7

MECHANICAL ENGINEERING

Angel Abbud-Madrid

[CIM 2/28]

7 course changes: SPRS501: SPACE RESOURCES FUNDAMENTALS
SPRS502: SPACE SYSTEMS ENGINEERING
SPRS504: ECONOMICS OF SPACE RESOURCES
SPRS505: SPACE OPERATIONS
SPRS506: INTERNATIONAL SPACE LAW & POLICY
SPRS507: ADVANCED PLANETARY GEOLOGY
SPRS591: SPACE RESOURCES PROJECT I
SPRS592: SPACE RESOURCES PROJECT II

Course prerequisites and semesters offered not displaying in course Catalog description.