

FACULTY SENATE MEETING MINUTES  
February 22, 2:00 – 4:00 pm, via Zoom

**Attendees:**

**Voting Members:** 15 total (8 needed for quorum). Quorum was present

P	Sebnem Duzgun (Chair)	P	Ventzi Karaivanov (ME)	A	Linda Figueroa (CEE/MN)	P	Joseph Horan (HASS)
P	Jeff King (MME)	P	Yvette Kuiper (GE)	P	John McCray (CEE)	P	Cynthia Norrgran (CBE)
P	Bettina Voelker (CH)	P	Lawrence Wiencke (PH)	P	Pat Kohl (PH)	A	Brandon Dugan (GP)
P	Sid Saleh (EB)	P	Deb Carney (AMS)	P	Soutir Bandyopadhyay (AMS)		

**Other Regular Attendees and Guests**

A	Tracy Gardner (Trustee)	P	Rick Holz (AA)	P	Paul Myskiw (RO)	A	Colin Terry (Student Life)
P	Sam Spiegel (Trefny)	A	Ethan Lewellin (USG)	P	Maxwell Silver (GSG)	P	Mara Green (AA)
P	Vibhuti Dave (UGS)	P	Tim Barbari (OGS)	A	Lori Kester (EM)	P	Joe Kraus (Library)
P	Karla Perez-Velez (CASA)	P	Deb Jordan (Trefny)	P	Tim Sorensen (PE)		

**Special Guest(s):** Wendy Adams (PH), Lakshmi Krishna (PH), Peter Aaen (EE)

**Welcome**

Sebnem Duzgun

**Academic Affairs**

Rick Holz

*COVID-19*

Mines has followed Jefferson County and dropped mask requirements a week ago; masks are required in the classroom but are no longer required in other settings. Mines has not reported surges.

*Budget*

Mines' budget development is in full swing; Academic Affairs has received budget requests from departments and other areas reporting to AA and will be reviewing all requests and discussing with appropriate parties. There were almost \$25 million in new requests made this year with over 85 FTEs; requests will be trimmed down to highest priorities for FY23. Communications will continue throughout the process to remain fair and transparent.

*Leadership Training*

Leadership in the community, including department heads, have started a leadership training program. The second session was hosted last week with positive reviews. Training on best practices of communication, budgeting processes and how budgets are developed, what Mines' resources look like, and projections. Additional conversations on avoiding duplication of courses across campus, working with scheduling, teaching assistants, and communicating across campus. Comment made on integration of specifically interdisciplinary leadership training; the training remains general. First cohort chosen by the Executive Committee; plan to run the training program every year with new constituents each time.

*Enrollment*

Mines reported sixty students below previous year's accepted students; still early in the process. Mines planned a smaller class size of 1,325 students due to the large undergraduate student size of 1,450 students in Fall 2021. Events held by admissions have been completely booked and have a greater than 85% attendance rate.

### *Mines 6pm Snow Closure*

Comment raised on last minute cancellation of 6pm classes received at 5:45 pm on Wednesday, 2/16. Holz to bring concerns from faculty to the Executive Committee.

### **Registrar's Office**

Paul Myskiw

No updates from the Registrar's Office.

### **Approval of Minutes – February 8, 2022**

Sebnem Duzgun

**MOTION:** To approve the Faculty Senate minutes of February 8, 2022 by King, seconded by Wiencke. Motion passed unanimously.

### **Teach@Mines**

Wendy Adams

Adams provided an overview of Teach@Mines' plans, including development of a non-thesis master's and applying for authorization to offer Colorado teacher licensure. Adams noted a recent survey response outlined negative association with teaching at Mines and push for "industry first". Student reported feeling discouraged or put down and embarrassed regarding their intended career path. Adams provided details on the importance of preparing students to be teachers and how it can benefit Mines.

Professionals surveyed on the Cantril Self-Anchoring Scale answered how highly they would rate their lives with K-12 teachers second to physicians. Teach@Mines found comments on teachers benefiting from work-life balance, student and colleague relationships, and financial stability. Math and science teachers may be eligible for some student loan forgiveness programs and scholarships. Colorado schools offer PERA retirement benefits; graduates begin teaching at twenty-two may receive full retirement benefits at fifty-seven.

A survey was conducted with Mines students in CHGN111; 54% of students indicated some interest in becoming a teacher, 4% of which would pursue a teaching certification. Students were misinformed on teaching salary, benefits, and overall discouragement. National data broken down by race and ethnicity found Hispanic, Black, and Asian-American students have a higher interest in becoming a teacher.

Teach@Mines' strategic plan for Spring 2022 included application to the Colorado Department of Education (CDE) and Colorado Department of Higher Education (CDHE) for authorization to license Secondary Math, Middle School Math, and Science teachers as an undergraduate program via the Minor in Teaching and the BSE STEM Teaching Focus Area. Teach@Mines expected to champion a non-thesis master's program, submit graduate level courses, and a graduate certificate. The non-thesis masters would be a BS + MS + licensure involvement. The benefit to Mines would be increase in recruitment of new undergraduate students, increase retention for students wanting to become a teacher, introduce a new graduate student population, and increase community engagement with Mines' alum as teachers.

Question raised on conversations with the graduate dean for creation of a new non-thesis master's program; Teach@Mines has communicated with OGS and provided details on the new program.

Question on where the program would be housed; the program would be interdisciplinary; Teach@Mines is currently in the University Honors and Scholars program and anticipate its housing there in the long-term.

Question on the program having people to teach all proposed courses; Adams noted several courses already exist and are taught regularly with practicing teachers with advanced degrees in their area.

Senator recommended conducting a survey on junior and seniors' interest in teaching in preparation for the new graduate degree program to provide a better overview of student interest.

### **Mines Undergraduate Advisory Committee (MURAC)**

Lakshmi Krishna

Krishna provided the goals and overview of MURAC. MURAC's goal is to assist, enhance, and promote undergraduate research initiatives across all academic disciplines at Mines. MURAC would advise the Office of Undergraduate Research Scholars (URS) in establishing policies and procedures for funding undergraduate research proposals, publicize the availability of undergraduate research funds and opportunities, provide advice for integrating research into curriculum, and provide recommendations in establishing awards to recognize outstanding faculty mentors and student mentees.

Krishna asked for faculty involvement with the committee to assist in these goals and commitments, and gain additional departmental feedback.

### **Committee Updates**

#### Senate Secretary

Joe Horan

No updates from the Senate Secretary.

#### Core Curriculum Committee

Joe Horan

Committee working on four different, broad topic areas including: humanities and social sciences, wellness, design and innovation, and computing, math, and science. Committee working to streamline and present a preliminary plan, but understands the existence of competing interests and balancing the interests of departments and the core curriculum. The 20-21 committee was in dialogue with different departments and performed focus meetings with department heads to understand interests and concerns. The committee plans to continue focus groups and outreach activities to gain additional feedback.

Question on when the preliminary plan will be completed; the committee has two upcoming meetings to articulate the plan with the expected finalization process in early March and preliminary elements in place mid-late March 2022.

#### Bylaw Change – Non-voting Representatives on Faculty Senate

Joe Horan

Faculty Senate had broader discussion on engagement and noted Academic Faculty Bylaw provision allowing all departments to appoint a non-voting representative. This allows departments to actively participate in Senate discussions. Senate has reached out to the four departments without representatives and has heard response from one of four.

The Bylaws require Senators to have two years of experience at Mines; non-voting representatives participating in Senate do not outline specific requirements beyond representatives being within a

departments' ranks. Suggestion made to explicitly state representatives do not require two years of experience at Mines; Bylaw change would require vote across all Mines' Academic Faculty.

### **Briefings, Informational Items, and Updates**

#### Posthumous Degree Award – Brennen Ward

Electrical Engineering had put forward a petition to consider the awarding of a posthumous degree to Brennen Ward.

**MOTION:** To approve the posthumous degree award petitioned by Electrical Engineering for Brennen Ward by Winecke, seconded by Kuiper. Motion passed unanimously.

#### Degree Awarded Posthumously – David Vasserman

Petroleum Engineering had put forward a petition to consider awarding a degree posthumously to David Vasserman.

**MOTION:** To approve the awarding of a degree posthumously for David Vasserman as petitioned by Petroleum Engineering by Voelker, seconded by Kuiper. Motion passed unanimously.

#### Faculty Senate March 22 Meeting

Faculty Senate considered the cancellation of the March 22 meeting during Spring Break.

**MOTION:** To approve the cancellation of the March 22, 2022 Faculty Senate meeting by King, seconded by Kuiper. Motion passed unanimously.

#### Senate Meeting Format

### **Undergraduate Council**

Jeff King

Undergraduate Council approved courses and course changes listed at the end of these minutes.

#### 1.1 **MECHANICAL ENGINEERING**

[CIM 11/17; UGC 1/26]

**2 program changes:** BS-MECH: BS in Mechanical Engineering

***CHANGE ONE:*** Addition of eight (8) tracks, consisting of one (1) ME Advanced Engineering Science elective and three (3) approved ME electives: Aerospace, Automation & Controls, Automotive, Biomechanics, Energy, Manufacturing, Materials, and Nuclear Energy.

***CHANGE TWO:*** Providing Mechanical Engineering students more choice (after "request" from our Industrial Advisory Board). Removal of EENG Feedback Control from the required course list and replace it with a ME elective. (EEGN will remain an ME elective).

**MOTION:** To approve the two program changes in Mechanical Engineering to BS-MECH: BS in Mechanical Engineering by King, seconded by Voelker. Motion passed unanimously.

#### 1.2 **CHEMICAL & BIOLOGICAL ENGINEERING**

[CIM 12/7; GC 2/9]

**1 program change:** BS-CHE: BS in Chemical Engineering  
*In the current Catalog, double-counting of the four core courses required for the combined BS/MS program is not allowed. This causes unnecessary confusion among students; request to remove this constraint.*

### Common Exam Scheduling

A subcommittee of UGC was asked to review common exam and other scheduling, recommendations were gathered by departments including the suggestion of moving common exams earlier into the day. A motion for the creation of a formal proposal but a second was not obtained.

### **Graduate Council**

Tina Voelker

#### 2.1 **CHEMICAL & BIOLOGICAL ENGINEERING**

[CIM 1/7; Provost 1/7; GC 2/16]

**1 new program:** XCRTG-CEPET: Chemical Engineering Processes in Energy Transitions

The program was proposed based on well-received feedback from alumni of the departments of chemical engineering and petroleum engineering. The certificate program aims to provide students with a working knowledge in addressing challenges in energy production, storage, and associated environmental remediation.

Question on overlap with the graduate certificate in carbon capture, utilization, and storage (CCUS); Voelker noted the program does have course overlap with CCUS and the proposer has communication with Prasad on moving forward, no objections raised at Graduate Council.

This is an entirely online graduate certificate.

#### 2.2 **ECONOMICS AND BUSINESS**

[CIM 1/27; GC 2/16]

**1 program change:** MS-ETM-NT: Engineering and Technology Management (ETM) Master of Science

*In the "Further Degree Requirements", replaced the Economic Evaluation Workshop with an Introductory Python Programming Workshop to better prepare students for using Python in quantitative classes. In addition, the material that was covered in the Economic Evaluation Workshop will be reviewed in the core class - EBG540 Accounting and Finance. Also added EBG565 Marketing for Technology-Based Companies back to the Technology Management and Innovation Course list.*

#### 2.3 **ENGINEERING, DESIGN, AND SOCIETY**

[CIM 2/3; GC 2/16]

**1 program change:** MSCR-HES: Humanitarian Engineering and Science  
*Currently not able to provide all interested prospective students with graduate coursework that reflects their professional development goals. Proposing a broader array of "track" options for students who do not easily fit with existing offerings. Proposed revisions to:*

*1. Add a disciplinary track in Humanitarian Robotics*

2. Add a disciplinary track in Data Science
3. Add an interdisciplinary track
4. Modify electives
5. Modify courses for geophysics disciplinary track
6. Modify courses for environmental engineering track

Senators discussed the involvement of multiple departments in the tracks, the existence of duplication tracks throughout programs, and bringing student cohorts across departments together. Undergraduate Council has a subcommittee reviewing the terminology of tracks, emphasis, ASIs, and specialties throughout the Undergraduate Catalog and expects to bring a finalized proposal to Graduate Council for consideration.

The tracks presented in HES will provide a humanitarian engineering perspective on its proposed tracks. The HES tracks were developed in close collaboration with the departments involved.

#### 2.4 **QUANTITATIVE BIOSCIENCES AND ENGINEERING**

[CIM 2/2; GC 2/16]

**1 program change:** MSPHD-BIO: MS & PHD – Quantitative Biosciences and Engineering

*Updating program to:*

*-add in new courses, BIOL 501, Advanced Biochemistry, and BIOL 590, QBE Graduate Seminar*

*-update BIOL 500*

*-update course electives*

*-remove Independent Study as a core course for the MSNT program*

*-update language*

#### 2.5 **MECHANICAL ENGINEERING**

[CIM 1/25; GC 2/16]

**1 program deactivation:** XCR-ADVMO: Graduate Certificate – Smart Manufacturing

*Deactivating the Graduate Certificate in Smart Manufacturing due to:*

*- recent departure of faculty member who would be teaching the required courses*

*-lack of student interest*

*May reconsider when additional faculty member is hired and more resources placed into recruiting for the certificate.*

Question raised on the deactivation versus suspension of a program; the deactivation of the program through CIM would remove and close the program in which a new program would need to be proposed in the Curriculum Inventory Management (CIM) system to bring the program back. Suspension would involve the removal of the program from the Catalog, pausing future admission into the program, and the program's continued existence in the CIM system.

**NOTE:** Mines does not have a policy in place for the suspension of programs.

Senator made note of the development of a program solely supported by a faculty member and subsequent deactivation following the loss of that faculty member. Senator requested additional information on the timeline of events, ongoing low student interest, and overall status of the program.

In the CIM system, a new program is asked to provide information on the sunset clause but deactivation does not ask for details beyond justification for the closing of the program. Senator suggested the addition of details regarding student interest, sunset information, and overall program status when deactivating a program in CIM.

Senator suggested suspension of the program rather than deactivation.

2.6

**GEOPHYSICS**

[CIM 2/1; GC 2/16 (Consent Agenda)]

**1 program change:** XCRTG-CCUS: Carbon Capture, Utilization, and Storage  
*Revision made to bring clarity to wording around courses, no changes to the actual program.*

**New Business/Updates**

Silver announced Graduate Student Government and Undergraduate Student Government to host another faculty appreciation over the next week and encouraged faculty to attend.

**Adjourn**

Meeting adjourned: 3:49 pm.

Next meeting: March 8, 2:00-4:00 pm via Zoom.

Sebnem Duzgun

**Executive Session**

Executive session began: 3:50 pm.

Executive session ended: 4:05 pm.

Sebnem Duzgun

**Undergraduate Council approved course changes:**

*GEGN330: Geoscientists Thermodynamics* – removal of prerequisite GEGN206

*GEOL314: Stratigraphy* – removal of prerequisites GEGN203, GEGN204, and GEGN205; added GEGN212 and GEGN217

*GEOL321: Mineralogy and Mineral Characterization* – removal of prerequisite GEGN206, addition of GEGN212

**Undergraduate Council approved new courses:**

*PHGN460: Elements of Modern Optics*