

COLORADO SCHOOL OF MINES
FACULTY SENATE MINUTES
January 12, 2017 2:00-4:00 p.m.
Student Center Ballroom B

ATTENDEES: Dinesh Mehta (President), Jürgen Brune (MN), Tzahi Cath (CEE), Jeff King (MME), Jason Ganley (CBE), Paul Martin (AMS), Mark Seger (CH), Chuck Stone (PH), Linda Battalora (PE), Reed Maxwell (GE) Jon Leydens (LAIS) **Representatives:** Heather Lammers (GSG), Quinn Tenorio (USG)

APOLOGIES: John Berger (ME), Steve Liu (MME)

GUESTS: Tom Boyd (Interim Provost), Kirsten Volpi (VP Finance), Lisa Nickum (Library), Carol Smith (University Librarian)

1. Provost

Interim Provost Tom Boyd gave a presentation on faculty productivity. The minutes below reflect Boyd's comments and discussion during the Senate meeting. This is a working version of the presentation, and not the final version.

1.1.

- **Productivity Guidelines and University Design Initiative**
 - **Moving the Institution Forward: A Four Component Approach**-How can CSM work smarter as an institution?
 - **Budget Model** – Finance predicts a budget shortfall for the coming years.
 - **Promotion and Tenure Expectations**
 - **Productivity Guidelines** – CSM wants to define transparent and equitable productivity guidelines.
 - **Holistic University** – Strategic Intent, programmatic priorities (development, size, resources, and support).
- **Faculty Productivity Guidelines:** The intent is to define transparent, equitable and sustainable expectations for faculty across the institution.
- **History of Faculty Productivity Guidelines Action and Discussion:** Stone asked if there are accommodations for faculty to take risks and whether those had been successful in the past? Boyd would like to build capital into the budget model for departments to add programs at their discretion. Volpi said many programs will be incentivized. Senate discussed the AYC (Academic Year Charge-out). Maxwell confirmed from his own research that Mines has a standard AYC versus other universities.
- **Teaching Assignment Guidelines:** A matrix of guidelines for teaching assignments per semester applicable to tenured, tenure-track, and instructional faculty.

- **Distribution of Productivity:** Graph of SCH (student credit hours) and research expenditures for tenured faculty. Suggests that faculty who have low research portfolios may have more teaching capacity, or more research opportunity.
- **Building New Productivity Guidelines: Evolution of the Proposed Guidelines:** Provost and Deans evaluated several different options, and expanded the definition of research activity to develop this matrix.
- **Productivity Baseline: Where are we now?** How many credit hours did our faculty teach? A snapshot of where we are today.
- **Class Size Baseline: Where are we now?** Mines advertises a small campus experience, and we want to honor what we advertise, while enhancing the students' learning experience. Boyd does not want to increase class sizes.
- **Proposed Productivity Guidelines:** Boyd worked out many versions of this matrix, and felt this is the best option, based on a modified ASU model. Martin asked if it is possible to measure the 20% service? Boyd said there is no definition of service within these guidelines. Maxwell suggested that a department head could use this as an enhancement or clarification of the faculty handbook. Explicitly looking for faculty providing outstanding work to the institution.
- **What Would Implementation Look Like?** The matrix should not be used in isolation, but as a component. Boyd wants the expectations for faculty to be fair and equitable.
- **Productivity Guidelines: Provost's Short Term Priorities** Help departments increase research opportunities, maintain a small campus experience at Mines, and support the faculty.
- **Departmental Productivity Analysis: Sample Departments** A matrix comparing four sample Mines departments with markedly different productivity parameters.
- **How do we compare?** Comparing Mines to other institutions in the public and private sector.
- **Mapping Instructional Cost:** Cost of instruction per student shows that we are at the high end for public universities. Goal is to optimize tuition per student. Cath wondered if and how we are advertising to prospective grad students? Boyd said we are setting up a budget to advertise to grad students. We are participating in the Delaware Cost Study for the first time this year.
- **One Size Does Not Fit All: Instructional Cost per SCH:** Compared nationally, this study provides a broad picture of financial comparisons. Mines makes a significant investment in administrative support, are we using this in the best way?
- **Inter-related University Design Components:** Build what the university looks like from the ground up.

- **Design Parameters Aggregated by Colleges:** Maxwell asked to compare to similar faculty and departments at other universities. Curious about expenditures and teaching loads versus peers. Volpe responded that we should have that data sometime this year.

Boyd will push this draft out to all Department Heads and Division Directors and ask for feedback. The goal is to present the final version at the town hall meeting in February.

2. Approval and announcements

2.1 Minutes from December 13, 2016. **Motion to approve minutes: Brune, second; Seger. Vote to approve: Yes: 8, No: 0, Abstain: 3.**

2.2 Executive Committee seeking approval to add Cath for Gianquitto. **Motion to approve Cath joining Executive Committee: Maxwell, second; Ganley. Vote to approve: Unanimous.**

3. Senate Working Group Updates

3.1 Evaluations Memo (Stone)-Faculty Concerns Memo **Motion to approve the slightly modified memo: Seger, second; Ganley. Vote to approve: Unanimous**

3.2 Campus Climate Survey (Seger) - Overall results of the faculty survey are posted the Senate website and the Committee is still processing the analysis of the data. Seger will have a draft of the results in the next few weeks. Senate will send out a leadership survey later in the semester after the faculty survey is finalized and posted on the website.

4. Committee and Council updates

4.1 Undergraduate Council (Ganley) - BSE Email votes to be returned by January 19. If UC approves, Senate can vote at January 24 meeting.

Ganley introduced items that passed at the UG meeting:

- New CBE Curriculum: CE and CBE are too similar, and are only 10 credit hours different. The two degrees are causing a lot of confusion with employers and students. The senior year spring semester will have all electives, and it will be possible to graduate in 3 ½ years. The revised BS Chemical Engineering will contain 12 hours of specialized content, and the BS in Chemical and Biological Engineering degree will be deactivated. The course changes are as follows: CBEN314: CHEMICAL ENGINEERING HEAT AND MASS TRANSFER (new) CBEN360: BIOPROCESS ENGINEERING (new) CBEN365: INTRODUCTION TO CHEMICAL ENGINEERING PRACTICE (new) BS-CBE: BS in Chemical and Biochemical Engineering (deactivation) BS-CHE: BS in Chemical Engineering (change)
- Program Change B.S. Engineering Physics: Addition of CSCI 250 replacing CBEN210. CBEN210 was removed, and CHGN122 or 125 was added as a pre-requisite (in addition

to pre-requisite PHG310) to the Physics major. Thermo course, PHGN341 to cover some thermodynamics fundamentals. The CSC1250 course (approved December 2016 UGC meeting) was added as a pre-requisite to PHGN311, 317 and 384.

- Economics and Business: Removal of specific tracks and addition of another capstone energy policy course. The energy minor program developed for the 2009-2010 catalog had three required course that spanned technology, economics and social issues, Introduction to Energy, ENGY200, and Energy Economics, EBGN330/ENGY330, and Global Energy Policy, ENGY490. In addition, there were three proscribed tracks to complete the minor: fossil based, renewable and a general track. These were intended to provide guidance for a connected sequence, but sometimes made graduation not possible due to course not being offered at times that did not conflict with a required major course or in the semester needed. An additional option for the ENGY/LAIS capstone course, LAIS464 HISTORY OF ENERGY AND THE ENVIRONMENT, was added to ENGY/LAIS 490 and LAIS 424.
- Computer Science: Update to CS Minor- We are modifying our CS Minor requirements to explicitly require CSCI261 for both Minor tracks.
- Computer Science: We propose the following new minor programs for CS: Robotics and Intelligent Systems in collaboration with the Department of Mechanical Engineering and Data Science in collaboration with the Department of Applied Mathematics and Statistics.
- CSEE: CS and EE propose the following new minor program: Computer Engineering. We developed the Computer Engineering Minor based on the ACM Joint Task Group on Computer Engineering Curricula that has been endorsed by the ACM Education Council.

4.2 Graduate Council Program Changes (Brune):

Chemical and Biological Engineering:

- CBE Master and PHD program change to make Applied Math a required course.:
- Re-introduce CBEN507 Applied Mathematics in Chemical Engineering course that was part of the core courses several years ago.

Electrical Engineering and Computer Science:

- The program change is specific to Electrical Engineering's three tracks. EE is refreshing the list of core classes to AWC, ISS and ESPE tracks.
- MSPHD-EECS: MS & PhD programs: Updated requirement earning a minor in CS at both the MS and PhD levels. There are 6 semester hours of coursework that must be met at the 500 level or above, and 9 semester hours of coursework at the PhD level.

Metallurgical & Materials Engineering (2 items)

- MEMSPHD-MT: ME, MS & PhD - Metallurgical & Materials Engineering (change)
The purpose is to add the Graduate Seminar as a requirement for the MME program.

Motion to approve graduate course changes and additions: Maxwell, second; Martin. Vote to approve: Unanimous

4.3 Research Council- No updates

5.0 Other Business

5.1 Science/Climate Change statement: Mehta noted that the CU faculty issued a statement regarding climate change, and asked the senate if they would like to create a statement regarding this issue. Maxwell and King volunteered to research the subject on campus. Cath is planning a semi-monthly faculty seminar, and will add climate change on the agenda to discuss.

5.2 Organize meetings with President Johnson. Not discussed.

5.3 Title IX for graduate students. Not discussed

6. Executive session

Next meeting January 24, 2017, 2-4 pm, Hill Hall 300