1.1 PETROLEUM ENGINEERING
[CIM 10/20; UGC 1/12]
1 program change: BS-PTE: BS in Petroleum Engineering
Move free elective (3cr) from Fall Junior to Fall Senior. Move HASS200 (3cr) from Spring Sophomore to Fall Junior. Move PEGN282 (1cr) from Spring Junior to Spring Sophomore. Move PEGN382 (1cr) from Fall Senior to Fall Junior. Move PEGN482 (1cr) from Spring Senior to Spring Junior.

The changes will allow students entering the PE department in spring of Sophomore year to begin the Professional Skills series. It will also allow transfer students to the PE Department to begin adding earlier the Professional Skills courses to their schedules. By moving the series earlier in the program, students will complete the series prior to Senior year, when implementation of professional skills such as technical writing, Capstone design teamwork, team writing, oral communication skills such as presentations and interviews, cover letters, resume writing are required.

1.2 PHYSICS
[CIM 10/20; UGC 1/12]
1 new program: MIN-PH: Minor in Physics

Mines Department of Physics encourages the campus to create a Minor in Physics that can follow two different tracks: A Minor in Engineering Physics (Option One) and Minor in Physics (Option Two). By enabling two options, we go from having a minor that no one could complete (due to non-physics prerequisite courses that delayed a student’s immersion into physics-rich courses ... which is where we are now) to a minor program that can effectively feature all our undergraduate courses.
1.3 MECHANICAL ENGINEERING
[CIM 11/17; UGC 1/26]

1 program change: BS-MECH: BS in Mechanical Engineering

To allow Mechanical Engineering Students to better select the courses/topics of interest they want and also market them when applying for job, ME plan to implement 4-cours tracks in 8 different topic areas, that will appear on the students transcripts.

The new tracks will each consist of one (1) ME Advanced Engineering Science elective and three (3) approved ME Electives. In summary, the tracks are:

- Aerospace
- Automation & Controls
- Automotive
- Biomechanics
- Energy
- Manufacturing
- Materials
- Nuclear Energy

A second change, giving Mechanical Engineering students more choice (after "request" from our Industrial Advisory Board), is to remove EENG Feedback Control from the required course list and replace it with a ME elective. (EENG will remain a ME elective)

3:00-3:15 pm Graduate Council

2.1 Catalog Change – 400- and 500-level course language and course numbering
Approved by GC 1/19

2.2 CHEMICAL & BIOLOGICAL ENGINEERING
[CIM 11/19; GC 1/19]

1 program change: MSPHD-CBE: MS & PhD – Chemical and Biological Engineering

In the current catalog, both Ph.D. and master students are required to register every semester for CBEN605 Colloquium; however, it is not currently specified how many colloquium credits can be counted towards each degree. Here, we are applying a three-credit maximum for counting towards the degree requirements.

2.3 GEOLOGY & GEOLOGICAL ENGINEERING
[CIM 11/18; GC 1/19]

1 program change: MPMEMSPHD-GE: MP, ME, MS & PhD – Geology & Geological Engineering

Updating GEGN Ph.D. catalog language - the current language is unnecessarily vague about the number of course credits required as part of the program. I suggest we change "At least 24 of the hours must be research credit hours" to "At least 24 of the hours must be research credit hours, and at least 24 of the hours must be earned through completion of coursework".

The GEOL PhD language will be discussed at a faculty meeting later.

2.4 HUMANITIES, ARTS, AND SOCIAL SCIENCES
[CIM 11/29; GC 1/19]
**1 program change:** MS-NREP: Natural Resources & Energy Policy

*Addition of thesis option to the existing MS program.*

**2.5 GEOCHEMISTRY**

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

**1 program change:** CRTG-GE: Certificate in Analytical Geochemistry

*Revisions made to correct typos and minor text errors; clarifying language to the combined program statement.*

**2.6 APPLIED MATHEMATICS & STATISTICS**

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

**1 program change:** MS-DSCI-NT: Non-Thesis Masters in Data Science

*Revision to improve clarity of the combined program description.*

3:15-4:00 pm  **Executive Session**

Sebnem Duzgun

Next meeting: February 22, 2:00-4:00 pm via Zoom.

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**Undergraduate Council Approved New Course**

- ORWE481: Optimization Models in Manufacturing
- CSCI200: Foundational Programming Concepts and Design
- MNGN251: Metallurgical and Materials Thermodynamics
- MNGN334: Chemical Processing of Materials
- MNGN426: Hydro- and Electro-Metallurgy
- MNGN430: Physical Chemistry of Iron and Steelmaking
- MNGN432: Pyrometallurgy
- MNGN461: Transport Phenomena and Reactor Design for Metallurgical and Materials Engineers
- MNGN462: Solid Waste Minimization and Recycling

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**Undergraduate Council Approved Course Changes**

- MEGN330: Introduction to Biomechanical Engineering – Addition of MEGN212 as prerequisite
- MEGN413: Aerospace Structures – Permanent number as part of the ME Aerospace Minor, ME technical elective
- GEGN403: Mineral Exploration Design – Change EDNS251 prerequisite to EDNS264

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**Undergraduate Approved Deactivated Courses**

- HASS492: Energy and Security Policy