FACULTY SENATE MEETING AGENDA
February 23, 2021, 2:00 – 4:00 pm, via Zoom

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Time	Item	Presenter
2:00-2:05 pm	**Welcome**	Andy Herring
2:05-2:15 pm	**Provost / Academic Affairs**	Rick Holz
2:15-2:25 pm	**Registrar's Office**	Paul Myskiw
2:25-2:30 pm	**Approval of Minutes** – February 9, 2021	Andy Herring
2:30-3:00 pm	**COVID-19 Discussion; Faculty Effects**	Andy Herring

- *FDR*
- *Field Sessions*

3:00 -3:10 pm	**Discussion on Retirement Benefits**	Neal Sullivan

3:10-3:25 pm   Committee Updates

- <u>Faculty Procedures Review and Recommendations Committee</u>   John McCray
  - Extension of ad hoc committee life
- <u>Senate Secretary</u>   Alina Handorean
- <u>Survey Committee</u>   Robin Bullock
  - Senate Decision on Distribution of Faculty Survey for 2021 – **For Vote**
- <u>Research Council</u>   Yvette Kuiper
  - Research Council Bylaw Changes – **For Vote**
- <u>Online Standards Committee</u>   Cynthia Norrgran
  - Finalized ad hoc committee proposal

3:25-3:40 pm   Undergraduate Council Updates   Jeff King
*Approved Undergraduate Council new courses and course changes have been added to the end of this agenda as informational FYI-only items.

1.1   COMPUTER SCIENCE
[status: CIM 1/6]
1 program change: BS in Computer Science
1. CS and Business Track: added EBGN230 to list of business electives.

2. CS and Robotics & Intelligent Systems Track: updated focus area courses to provide flexibility in student's degree path. Focus areas divided into (1) Perception, (2) Cognition, (3) Interaction. Areas contain two courses. Students can take both courses in one area and one course from the other two areas.

3. CS and Space Track: Proposal driven by high demand of computer scientists in the aerospace industry. The curriculum was chosen after consulting with CS@Mines faculty, Director of Center

*for Space Resources at Mines, and several Lockheed Martin software engineers. Unique in its focus on interdisciplinary knowledge related to aerospace engineering and space resources. **Championed by Jeffrey Paone.***

1.2 **PETROLEUM ENGINEERING**
[status: CIM 12/2]
1 program change: BS-PTE: BS in Petroleum Engineering
The Petroleum Engineering department in cooperation with the Trefny Center initiated a review of the petroleum engineering curriculum in Fall 2019. The goals include reduction of course rigidity; determination of material additions, deletions, and potential sequencing options; incorporation of technological capabilities such as online courses or other pedagogical approaches; explicit linking of courses to each other and documentation for staff, faculty and especially students.

*Learning outcomes have been identified (total of seven). A determination of "phase changes" are being established. **Championed by Linda Battalora.***

1.3 **MECHANICAL ENGINEERING**
[status: CIM 1/6]
1 program change: MIN-BMECHE: Minor in Biomechanical Engineering
Proposed change is making CBEN120 optional/elective course with no other changes proposed. ***Championed by Oyvind Nilsen.***

1.4 **ELECTRICAL ENGINEERING and COMPUTER SCIENCE**
[status: CIM 1/6]
1 program change: MIN-RIS: Minor in Robotics and Intelligent Systems
Course updates to provide flexibility and align with robotic knowledge areas. ***Championed by Jeffrey Paone.***

3:40-3:55 pm **Graduate Council Updates** Neal Sullivan

2.1 **COMPUTER SCIENCE**
[status: CIM 1/19; GC: 2/17]
1 program change: MSPHD-CS: MS & PhD – Computer Science
Clarifying language on specific prerequisite courses for admission to the program and procedures for requesting the Qualifying Exam. ***Championed by Dorothy Cheng.***

2.2 **MECHANICAL ENGINEERING**
[status: CIM 1/7 & 1/17]
4 program changes to Mechanical Engineering:
CERTMSPHD-SPACE: CERT, MS, & PhD – Space Resources
Program updates include the addition of clarification about the PhD program including process and expectations for the Qualifying Exams, Dissertation Research Proposals and Defense and Required number of Publications and Presentations. Addition of new courses to the SPRS Elective list. Text updates throughout for clarification. ***Championed by Angel Abbud-Madrid.***
CERTMS-ADVMAN: CERT & MS – Advanced Manufacturing
Changes to language in Graduate Certificate in Advanced Manufacturing to Additive Manufacturing, changes to core requirements of Additive Manufacturing, changes to language

in Master's of Science in Advanced Manufacturing (non-thesis), added selection on electives, language changes to Mines' Combined Undergraduate/Graduate Degree program and electives. **Championed by Craig Brice.**

XCR-ADVMO: Graduate Certificate – Smart Manufacturing

Language change. Course change: EBGN576 (removed), addition of ELECT to allow students to select from courses in Advanced Manufacturing Electives **Championed by Craig Brice.**

MSPHD-MECH: MS & PhD – Mechanical Engineering

Major edits to the structure of the Mechanical Engineering PhD qualifying exam to streamline the exam, improve consistency across the department, expand qualifying exam options to better reflect the academic needs of the department's PhD students. **Championed by Owen Hildreth.**

2.3 **ECONOMICS and BUSINESS**
[status: CIM 1/18]
1 program change: MS-ETM-NT: Engineering and Technology Management (ETM) Master of Science

Deletion of electives: EBGN 515, 567, 573, 5XX from "Technology Management and Innovation" list. These courses have not been offered in about 5 years. Added EBGN 578 to this list. **Championed by Tulay Flamand**

2.4 **ELECTRICAL ENGINEERING**
[status: CIM 1/13]
1 program change: MSCR-SEPS: Smart-Grid, Power Electronics, and Electrical Power Systems

Language changes, no substantive changes to the program itself. **Championed by Dorothy Cheng.**

2.5 **APPLIED MATHEMATICS and STATISTICS**
[status: CIM 1/14]
1 program change: MSPHD-AMS: MS & PhD – Applied Math/Statistics

Change to required coursework and language within the program. Courses changed: **Specialty in Computational & Applied Mathematics;** *MATH501 (removed),* **Specialty in Statistics;** *MATH530 (removed), MATH560 (added),* **Specialty in Computational & Applied Mathematics;** *MATH501 (removed), MATH588 (added),* **Specialty in Statistics;** *MATH530 (removed), MATH 560 and 588 (added).* **Championed by Karin Leiderman.**

2.6 **CIVIL and ENVIRONMENTAL ENGINEERING**
[status: CIM 1/12 & 1/13]
2 program changes to Civil and Environmental Engineering:

MSPHD-CEE: MS & PhD – Civil Eng & Environmental Eng

Language clarification, addition and removal to core courses in **Structural Engineering***: CEEN543 (removed), CEEN545 (added), CEEN533 (added).* **Championed by Reza Hedayat.**

XCR-ENVMOD: Graduate Certificate in Environmental Modeling

Number of course credits changed from 12 to 9. The elective course is eliminated to reduce the required number of courses needed for the certificate program to make it more appealing, accessible, and affordable with better student retention for the timely completion of the certificate program in one year.

3:55-4:00 pm   **Adjourn**   Andy Herring

Approved Undergraduate New Courses:
PEGN282: Professional Skills 1
PEGN382: Professional Skills 2
PEGN482: Professional Skills 3
CEEN315: Civil and Environmental Engineering Tolls
CSCI295: Industry Exploration
CSCI395: Industry Exploration II
MATH470: Mathematical Modeling of Spatial Processes in Biology

Approved Undergraduate Course Changes:
PEGN311: Drilling Engineering
PEGN201: Petroleum Engineering Fundamentals
CEEN311: Mechanics of Materials
CHGC336: Analytical Chemistry
CHGN337: Analytical Chemistry Laboratory
CSCI400: Principles of Programming Languages
GPGN455: Earthquake Seismology