

FACULTY SENATE MEETING AGENDA
March 8, 2:00 – 4:00 pm, Green Center 224 and Zoom

<u>Time</u>	<u>Item</u>	<u>Presenter</u>
2:00-2:05 pm	Welcome	Sebnem Duzgun
2:05-2:15 pm	Academic Affairs	Rick Holz
2:15-2:25 pm	Registrar's Office	Paul Myskiw
2:25-2:30 pm	Approval of Minutes – February 22, 2022	Sebnem Duzgun
2:30-2:45 pm	I&E Activities	Werner Kühr
2:45-3:00 pm	Tenure Track Junior Faculty COVID Effects	Mike McGuirk
3:00-3:15 pm	Childcare Discussion	Joe Horan
3:15-3:25 pm	Briefings, Informational Items, and Updates <i>Existing x98 course reports, approval process for permanent course numbers</i>	
3:25-3:35 pm	Undergraduate Council <u>Approved Undergraduate Council course changes and new courses listed at the end of this agenda.</u>	Jeff King

Program(s) for Vote – presented to Senate 2/22/22

- 1.1 **CHEMICAL & BIOLOGICAL ENGINEERING**
[CIM 12/7; GC 2/9]
1 program change: 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.

Program(s) being presented – for vote 3/22/22

- 1.2 **CIVIL & ENVIRONMENTAL ENGINEERING**
[CIM 2/16; Provost 2/16]
1 new program: BS-CTRST: Bachelor of Science in Construction Engineering
- 1.3 **GEOPHYSICS**
[CIM 12/21]
1 program change: BS-GPE: BS in Geophysical Engineering
Recent student feedback indicates that the current single-semester Applied Geophysics course is insufficient to cover applied geophysics methods in the necessary depth. To better prepare the students for their future careers and prepare them for the geophysics

summer camp, we propose to extend the Applied Geophysics to two-semester courses: GPGN318 Applied Geophysics I and GPGN319 Applied Geophysics II. The two courses will be offered synchronically with the two other current courses, GPGN 328 Physics of the Earth I and GPGN329 Physics of the Earth II, with one series (328/329) focusing on theories and the other (318/319) focusing on applications. Removal of GPGN350.

3:35-3:55 pm **Graduate Council**

Tina Voelker

Graduate Council approved course changes and new courses listed at the end of this agenda.

Program(s) for Vote – presented to Senate 2/22/22

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

2.2 MECHANICAL ENGINEERING

Program Suspension: XCR-ADVMO: Graduate Certificate – Smart Manufacturing

2.3 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.

2.4 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*

2.5 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 Chemistry, 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

2.6

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.

Program(s) being presented – for vote 3/22/22

2.7

MECHANICAL ENGINEERING

[CIM 2/1; GC 3/2]

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.

2.8

PETROLEUM ENGINEERING

[CIM 1/31; GC 3/2]

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.

2.9

MINING ENGINEERING

[CIM 2/17; GC 3/2 (Consent Agenda)]

1 program change: MP-MEM: MP – Mining Engineering and Management

Minor cosmetic changes to the program language.

2.10

ELECTRICAL ENGINEERING

[CIM 2/18; GC 3/2 (Consent Agenda)]

1 program change: MSPHD-EE: MS & PhD – Electrical Engineering
Updated the “EPSE” track name to “PES” (Power and Energy Systems).

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

Sebnem Duzgun

Next meeting: April 12, 2:00-4:00 pm via Zoom.

Undergraduate Council approved course changes

GEGN330: Geoscientists Thermodynamics – *Removal of GEGN206 prerequisite*

GEOL314: Stratigraphy – *Removal of prerequisites GEGN203, GEGN204, and GEGN205. Added prerequisites GEGN212 and GEGN217*

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

Undergraduate Council approved new course

PHGN460: Elements of Modern Optics

GPGN318: Applied Geophysics I

GPGN319: Applied Geophysics II

EBGN307: Business Communications

EBGN308: Principles of Marketing

MNGN318: Statics and Dynamics Combined for MN

Undergraduate Council approved course deactivations

GPGN314: Applied Geophysics

Graduate Council approved course changes

GEOL558: Earth Resource Data Science 2: Applications and Machine-Learning – *Added prerequisites GEOL557 and DSCI403/CSCI303*

GEOL513: Hydrothermal Geochemistry – *Added prerequisites GEGN401 or GEOL524*

GEOL517: Field Methods for Economic Geology – *Update to course description and addition of prerequisites GEGN401 or GEOL524*

GPGN590: Instrumental Design in Applied Geosciences – *Change to course title, description, and addition of prerequisite CSCI250 or instructor permission*

MATH510: Ordinary Differential Equations and Dynamical Systems – *Addition of prerequisite MATH301*

EBGN563: Management of Technology and Innovation – *Title change and updated course description*

BIOL500: Cell Biology and Biochemistry – *Updated course information to include lab section and increased to four (4) credits*

MNGN510: Fundamentals of Mining and Mineral Resource Development – *Updating prerequisites to MATH111/112 or equivalent*

CEEN540: Advanced Design of Steel Structures - *Update to course offering date (listed incorrectly in the Catalog description)*

CEEN541: Design of Reinforced Concrete Structures II - *Update to course offering date (listed incorrectly in the Catalog description)*

CEEN542: Timber and Masonry Design - *Update to course offering date (listed incorrectly in the Catalog description)*

CEEN545: Steel Bridge Design - *Update to course offering date (listed incorrectly in the Catalog description)*

CEEN547: Design of Prestressed Concrete Structures - *Update to course offering date (listed incorrectly in the Catalog description)*

EENG509: Sparse Signal Processing – *Course description update, addition of prerequisites EENG411 and EENG515 or instructor consent*

EENG515: Mathematical Models for Signals and Systems – *Course description update*

EENG571: Modern Adjustable Speed Electric Drives – *Course offering updated*

EENG572: Renewable Energy and Distributed Generation - *Course offering updated*

EENG577: Advanced Electrical Machine Dynamics for Smart-Grid Systems - *Course offering updated*

EENG580: Power Distribution Systems Engineering - *Course offering updated*

EENG582: High Voltage AC and DC Power Transmission - *Course offering updated*

EENG587: Power Systems Protection and Relaying - *Course offering updated*

EENG588: Energy Policy, Restructuring and Deregulation of Electricity Market - *Course offering updated*

MEGN511: Fatigue and Fracture – *Added online modality for Spring 2023*

MEGN515: Computational Mechanics - *Added online modality for Spring 2023*

MEGN566: Combustion - *Added online modality for Spring 2023*

MNGN551: Mine Accounting – *Changes to course description and grammar edits*

MNGN554: Mine Finance – *Changes to course description and grammar edits*

SPRS501: Space Resources Fundamentals – *Course offering added to course description*

SPRS502: Space Systems Engineering - *Course offering added to course description*

SPRS504: Economics of Space Resources - *Course offering added to course description*

SPRS505: Space Operations - *Course offering added to course description*

SPRS506: International Space Law & Policy - *Course offering added to course description*

SPRS507: Advanced Planetary Geology - *Course offering added to course description*

SPRS591: Space Resources Project I - *Course offering added to course description*

SPRS592: Space Resources Project II- *Course offering added to course description*

SYGN588: GIS-Based Real World Learning Project I – Fundamentals – *Course name change*

Graduate Council approved new courses

PHGN581: Laser Physics

GPGN545: Introduction to Distributed Fiber-Optic Sensing and Its Applications

PEGN518: Advanced Production Engineering

SYGN590: GIS-Based Real World Learning Project II – Advanced Applications

Graduate Council approved course deactivations

CEEN571L: Advanced Water Treatment Engineering and Water Reuse – Laboratory

CEEN575L: Hazardous Waste Site Remediation: Treatability Testing

CEEN576: Pollution Prevention: Fundamentals and Practice