

**THE UNIVERSITY OF WISCONSIN-MILWAUKEE
College of Engineering and Applied Science**

FACULTY MEETING

Friday, October 1, 2021 10:30 A.M. Virtually Via Microsoft Teams

AGENDA

I. DEAN UPDATE

II. INTRODUCTIONS

A. Faculty

1. Xuefeng Bao, Visiting Assistant Professor, Biomedical Engineering

B. Staff

1. Robert Packard, Academic Advisor, Graduate Programs
2. William Dussault, Faculty Associate, Electrical Engineering
3. Loran Zwiefelhofer, Research Support Manager

III. ANNOUNCEMENTS

- A. Jean Opitz – Development update
- B. Michael Grypp, UITs

IV. INFORMAL REPORTS – See Attachment 1

- A. Opportunity for questions regarding Informal Reports

V. DETERMINATION OF THE PRESENCE OF A QUORUM FOR FACULTY MEETING

VI. AUTOMATIC CONSENT BUSINESS

- A. Minutes of the April 23, 2021 meeting
- B. New Courses and Course Changes – See Attachment 2
- C. B.S. in Data Science Program Changes – See Attachment 3
- D. B.S. in Computer Science Program Changes – See Attachment 4

VII. NEW BUSINESS – None

VIII. GENERAL DISCUSSION

IX. ADJOURNMENT

John R. Reisel, Secretary
CEAS Faculty

JRR
Attachments

INFORMAL REPORTS

Office of Student Services – Todd Johnson

CEAS is creating a Pre-Engineering program in partnership with the College of General Studies for new students starting in Fall 2022. The purpose of the program is to offer a pathway for a larger and more diverse study body consistent with the UWM 2030 Plan. The students will be admitted to the associate's degree level in CGS to start. CGS will offer courses on the main campus with instructors selected specifically for this program. The tuition will be roughly 50% of bachelor's level tuition. The program is designed to prepare pre-calculus students for the engineering curriculum. The emphasis will be on math preparation. The program will feature small class sizes, cohort scheduling, peer mentoring and supplemental instruction.

Career Services – Juli Pickering

The college will host two career fairs this fall for engineering and computer science students:

- Fall Virtual Industry Expo: Friday, October 1, 2021 from 11 am – 2 pm in Handshake
- Fall In-Person Industry Expo: Friday, October 8, 2021 from 10 am – 2 pm in the Union Ballroom.

To date, 119 employers will participate in the two events. Please encourage your classes to attend!

Curriculum Committee – Prof. Church

Meeting agendas and minutes from the CEAS Curriculum Committee are available online at <https://sites.uwm.edu/ceas-cc/>

Graduate Program Committee – Prof. Law

No Report

Academic Planning Committee – Prof. Petering

No Report

Faculty Senate – Prof. Reisel

In September, the Faculty Senate approved changes to the Academic Drop and Probation Policy and endorsed a statement on vaccines put forward by the University Committee. Additionally a statement from the Senate on the impacts of the Title and Total Compensation project was passed.

ATTACHMENT 2

NEW COURSES

COMPSCI 811 ADVANCED MACHINE LEARNING, 3 cr., G
Advanced topics and applications in machine learning, including deep learning, recurrent neural networks, EM algorithm and clustering, reinforcement learning, Markov models and MCMC, and variational inference. Jointly offered as ELECENG 811
Prereq: ELECENG 711 or (ELECENG 420 and COMPSCI 411) or instructor consent.

COURSE CHANGES (Additions made in **Green**. Deletions Indicated in **Red**)

CIV ENG 360 INTRODUCTION TO STRUCTURAL ANALYSIS, 3 cr., U
Elementary structural analysis techniques; beams, trusses, statically determinate frames, influence lines; analysis of indeterminate structures by superposition and computer analysis.
Prereq: **Civ Eng 203(P) or Civ Eng 303(P); ElecEng 234(C)**

CIV ENG 372 INTRODUCTION TO STRUCTURAL DESIGN, 4 cr. U
Intro to design of reinforced concrete, steel, and wood structures; material properties; codes; design for flexure, shear and axial loads; connections.
Prereq: jr st.; **Civ Eng 203(P) or Civ Eng 303(P); Math 233(C)**

CIV ENG 413 ENVIRONMENTAL ENGINEERING, 3 cr., U/G
Water pollution and control; hazardous substances and risk assessment; water and wastewater treatment systems; air-pollution and emission control; solid wastes; design of treatment facilities.
Prereq: jr st & admis to an Eng major or grad st. ~~st; MechEng 320(P).~~

COMPSCI 732 TYPE SYSTEMS FOR PROGRAMMING LANGUAGES, 3 cr., G
Lambda calculus, simple types, record types, subtypes, polymorphic types, type reconstruction, universal types, bounded quantification, higher-order types.
Prereq: grad st; CompSci 431(P) ~~& 654(P).~~

ATTACHMENT 3

BACHELOR OF SCIENCE IN DATA SCIENCE PROGRAM CHANGES

Proposed Change: Allow Math 211-212 as an alternative to Math 231-232-233.

Rationale:

Math 212 is a new course.

Math 212: Survey in Calculus and Analytic Geometry II, 4 cr, U.
Continuation of first semester survey of calculus with applications to business administration, economics, and non-physical sciences. Topics include integration, multivariable calculus, Taylor polynomials and applications. Prereq: grade of C or better in one of the following: MATH 208(P), MATH 211(P), MATH 213(P), MATH 221(P), or MATH 231(P).

BACHELOR OF SCIENCE IN COMPUTER SCIENCE PROGRAM CHANGES

Proposed Change: Allow Math 211-212 as an applied Math Elective

Rationale:

Math 212 is a new course.

Math 212: Survey in Calculus and Analytic Geometry II, 4 cr, U.
Continuation of first semester survey of calculus with applications to business administration, economics, and non-physical sciences. Topics include integration, multivariable calculus, Taylor polynomials and applications. Prereq: grade of C or better in one of the following: MATH 208(P), MATH 211(P), MATH 213(P), MATH 221(P), or MATH 231(P).