

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

FACULTY MEETING

Friday, January 29, 2021 10:30 A.M. Virtually by Microsoft Teams

MINUTES

The meeting was called to order at 10:30 a.m. with Dean Brett Peters presiding.

PRESENT: Professors Amano, Armstrong, Avdeev, Chang, Cheng, Church, Cuzner, Dabagh, Dhingra, El-Hajjar, Goyal, Graettinger, Hanson, Helwany, Hu, Jang, Kate, Law, Li, Liao, Liu, Ma, Mali, McRoy, Misra, Munson, Nasiri, Niu, Nosonovsky, Otieno, Petering, Peters, Premnath, Qin, Qu, A.Rahman, M.Rahman, Rammer, Reisel, Rohatgi, Salowitz, Seifoddini, Sobolev, Stern, Sung, Tabatabai, Titi, W.Wang, Y.Wang, J. Yu, Z.Yu, Zhang, J.Zhao, T.Zhao

EXCUSED: Prof. Venugopalan

GUEST: L. McGovern

I. DEAN UPDATE

The big goals of CEAS were reviewed, along with an overview of some of the challenges facing CEAS moving forward financially. A summary of the budget allocations over the last few years was presented. For FY22, has a budget allocation of approximately \$15 million before fringe benefit add-on. This allocation process is led by the Provost and is based on the amount of funds generated in the budget model formula and through reallocation of the base model results based on school/college needs and strategic goals of the campus. For the budget year, approximately 22% of the CEAS budget allocation came from the reallocation funds. The amount of reallocation funds is something that CEAS can't directly control, and they can be reduced in future years – and there is pressure from other units to do so. Moving towards and achieving the big goals would greatly reduce the dependence of the CEAS budget on the generosity of the Provost and other university leadership.

Additionally, faculty and staff could see additional benefits from increasing the number of bachelor's degrees awarded each year and the amount of research expenditures. These benefits could include greater job satisfaction due to higher rankings of CEAS, the hiring of more faculty and staff, funds to hire more graduate students, higher salaries, summer support, additional staff support, routinely available travel funds, more funds for regular office computer upgrades, and better equipped offices and labs. However, if progress isn't made to improve the budget situation through movement towards the big goals, faculty are likely to see increased workloads, a continued downward spiral in funding, and increased vulnerability to reductions in the reallocation funds. Looking at trends in state support, the likelihood of a continued tuition freeze, and declining numbers of traditional college age students in our traditional recruiting regions, it is easy to conclude that the CEAS financial situation will not improve if we don't work to improve it ourselves.

II. ANNOUNCEMENTS

- A. E. Munson provided an update on academic affairs. Faculty and instructional staff should familiarize themselves with the campus policy on final examinations (S-1-9). Essentially, all courses of two or more credits should have a final assessment, and if that assessment is a test, it should take place at the scheduled time during finals week. The length of the test should be no more than 2 hours. Synchronous on-line courses should follow these guidelines, while asynchronous on-line courses can be more flexible in the timing of the exam. The exam time can not be changed to an earlier time than that in the final exam schedule, unless it is being moved to the general optional exam time. Students cannot be required to take more than 2 final exams in one day. If students have non-academic difficulties with taking the exam during the exam time, faculty are encouraged to work with the students to accommodate the problem, but are not required to do so (with the exception of documented health and family emergency reasons).

Spring break is scheduled for March 22-26. Faculty are reminded that they should not set any due dates for assignments over spring break.

Scenario planning for the Fall 2021 semester is on-going. The plan is to prepare for normal in-person instruction, with the idea that a similar number of in-person sections being offered as in the Fall 2019 semester. These plans may shift as we get closer to the Fall 2021 semester, but it is seen as being more feasible to plan for in-person instruction and switch to on-line than to plan for on-line and shift to in-person. As far as presence on campus is concerned, it is thought that faculty and staff would only be required to be on campus if the public health situation returns to normal.

III. INFORMAL REPORTS – See Attachment 1

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

As 53 voting faculty members were present, a quorum was present.

V. AUTOMATIC CONSENT BUSINESS

- A. Minutes of the December 11, 2020 Meeting
- B. Course Changes – See Attachment 2
- C. Biomedical Engineering Program Changes – See Attachment 3

VI. NEW BUSINESS -- None

VII. GENERAL DISCUSSION

- A. Profs. Sobolev and Cuzner expressed concerns over the current on-campus COVID testing procedures, and that these concerns be brought to the attention of the appropriate campus officials.

- B. L. McGovern reminded faculty about the upcoming MERC events, which will be on every Friday in February from 2:30 to 4:30 p.m.

VIII. ADJOURNMENT

Meeting Adjourned at 11:14 a.m.

John R. Reisel, Secretary
CEAS Faculty

JRR
Attachments

INFORMAL REPORTS

Office of Student Services – Todd Johnson

No Report

Career Services – Juli Pickering

No Report

Curriculum Committee – Prof. Church

The curriculum committee is attempting to clean up the CEAS-related items on the Course Information Management (CIM) system used to track and process course changes. Please do your best to communicate the status of future CIM forms with your department representative to the curriculum committee so it is understood when an item should be considered for action by the curriculum committee.

Graduate Program Committee – Prof. Law

No Report

Academic Planning Committee – Prof. Abu-Zahra

APC held a retreat meeting over two days (Jan 12th-13th) and invited administrators from the Dean's office to present the current state of the college and the challenges and opportunities facing our academic programs, research, students, and finances. APC will review the information and data provided in the presentations in its Spring meetings and will provide the Dean's office with its recommendations accordingly.

Faculty Senate – Prof. Reisel

The January Faculty Senate meeting is scheduled for January 28.

COURSE CHANGES

(Additions made in green. Deletions Indicated in Red)

- BME 301 ~~385~~ FUNDAMENTALS OF ~~INTRODUCTION TO~~ BIOMATERIALS, 3 cr. U
 Fundamentals ~~Introduction to the fundamentals~~ of biomaterials including ceramics, metals, ~~and~~ polymers. ~~and natural biomaterials; Biological responses to implants; clinical perspectives; designing new biomaterials; tissue engineering. Important issues in the selection, design, manufacturing, and evaluation of biomaterials. Current applications, and emerging technologies. Jointly offered with & counts as repeat of MatlEng 385.~~
 Prereq: BioSci 203(P), ~~jr st~~, MatlEng 201(P)
- BME 305 INTRODUCTION TO ENGINEERING BIOMECHANICS, 3 cr., U
 Introduction to engineering biomechanics principles applied to the musculoskeletal system and human body for analysis of human movement.
 Prereq: BioSci 203(P), BME 302/~~MechEng302~~(P)
- BME 320 ENGINEERING OF BIOMEDICAL DEVICES I, 4 cr., U
 Physiological and biomechatronic systems, sensors and actuators, signal processing, hearing aid and implants. Laboratory experiments sessions included.
 Prereq: jr st., BME 101(P), BME 302(C)/~~MechEng(C)~~, ~~or grad st.~~
- 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 303(P) ~~or~~ CIV ENG 203(P)
- 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 303(P) ~~or~~ CIV ENG 203(P)
- MECHENG 320 INTRODUCTION TO FLUID MECHANICS, 3 cr., U
 Basic law of fluid mechanics with applications to engineering problems and with ~~discussion. laboratory demonstrations.~~
 Prereq: MechEng 301(C); ElecEng 234(P) & PHYSICS 209(P). ~~Civ Eng 202(P).~~

BIOMEDICAL ENGINEERING PROGRAM CHANGES

Summary:

- CIV ENG 201 and CIV ENG 202 are replaced by CIV ENG 203 and Engineering core credits reduced to 24 from 26.
- Total credits in electives are increased from 15 to 17. Students will be required to take 11 credits from the list of electives while there will be 6 free elective credits

CURRICULUM

Engineering Core - 24 credits

BME 101	Fundamentals of Biomedical Engineering	3
CIV ENG 203	Introduction to Solid Mechanics	4
EAS 200	Professional Seminar	1
ELECENG 301	Electrical Circuits I	3
ELECENG 305	Electrical Circuits II	4
MATLENG 201	Engineering Materials	4
MECHENG 101	Computational Tools for Engineers	2
MECHENG 301	Basic Engineering Thermodynamics	3

Technical Electives - 17 credits

Select 11 credits from the approved technical electives list below and 6 credits free elective(s):

BIO SCI 150	Foundations of Biological Sciences I
BIO SCI 152	Foundations of Biological Sciences II
BME 585	Advanced Biomaterials
BME 599	Senior Thesis
BME 690	Topics in Biomedical Engineering:
BME 699	Independent Study
BUS ADM 447	Entrepreneurship
CHEM 102	General Chemistry
CHEM 104	General Chemistry and Qualitative Analysis
CHEM 343	Organic Chemistry
CHEM 344	Organic Chemistry Laboratory
CHEM 345	Organic Chemistry
CIV ENG 311	Introduction to Energy, Environment, and Sustainability
COMPSCI 250	Introductory Computer Programming
COMPSCI 411	Machine Learning and Applications
EAS 1	Engineering Co-op Work Period

EAS 497
ELECENG 361
ELECENG 410
ELECENG 436

ELECENG 437

IND ENG 360
MECHENG 320
MECHENG 474

Study Abroad:
Electromagnetic Fields
Digital Signal Processing
Introduction to Medical
Instrumentation
Introduction to Biomedical
Imaging
Engineering Economic Analysis
Introduction to Fluid Mechanics
Introduction to Control Systems