

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

**FACULTY MEETING**

**Friday, September 26, 2014      1:45 p.m.      EMS E190**

**MINUTES**

The meeting was called to order at 1:48 p.m. with Dean Brett Peters presiding. Fifty faculty members were present:

EXCUSED:      Professors Amano, D'Souza, Goyal, Hanson, Kouklin, Lopez, Nambisan, Nasiri, Pillai, Renken, Venugopalan, Wornoyoh

ABSENT:      Professors Avdeev, Cheng, Liu

GUESTS:      J. Britz

***I. ANNOUNCEMENTS***

- A.      Provost Britz addressed the faculty. Highlights included updates on (i) administrative searches (School of Education, and College of Health Sciences dean positions, Vice Provost for Research, Chancellor), (ii) School of Continuing Education format, (iii) the budget model and the need to generate more tuition revenue, and (iv) the needs to boost research expenditures and retain top faculty.
- B.      Associate Dean Perez provided an update on ABET preparations and a primer on the upcoming site visit (November 9-11). At this time, department should be finalizing course binders and preparing the undergraduate labs for the visit.
- C.      Dean Peters acknowledged Associate Dean Perez's service to the college as he has now transitioned into a ½ time role in that position.
- D.      Dean Peters thanked Drs. Bravo and McRoy for being interim associate deans.

***II. INTRODUCTIONS***

**A. Faculty**

- 1. Ali Borji, Assistant Professor, Electrical Engineering and Computer Science
- 2. Robert Cuzner, Assistant Professor, Electrical Engineering and Computer Science
- 3. Jun Jie Niu, Assistant Professor, Materials Science and Engineering

4. Nathan Salowitz, Assistant Professor, Mechanical Engineering
5. Lingfeng Wang, Associate Professor, Electrical Engineering and Computer Science
6. Yin Wang, Assistant Professor, Civil and Environmental Engineering

**III. INFORMAL REPORTS** – See Attachment 1

**IV. AUTOMATIC CONSENT BUSINESS**

- A. Minutes of the April 25, 2014 meeting

**V. NEW BUSINESS**

- A. Update on Strategic Plan / Academic Planning

Dean Peters provided a thorough review of the progress of the college in meeting the strategic plan goals. Highlights include

- (1) Ranking of the graduate program in engineering according to USNews went from 131 in 2012 to 124 in 2014.
- (2) Nine new faculty were added in the past year.
- (3) Research expenditures decreased from \$7 million in 2011-12 to \$3.8 million in 2013-14.
- (4) Undergraduate enrollment increased from 1541 in 2012 to 1600 in 2014. B.S. graduates increased from 238 to 292.
- (5) M.S. student enrollment increased from 187 in 2012 to 211 in 2014, and Ph.D. student enrollment increased from 185 to 211.
- (6) In Fiscal Year 2014, \$390,000 was raised for CEAS through private fundraising.
- (7) The Faculty Senate has approved the Biomedical Engineering Department-like Body.

See Attachment 2 for a copy of the presentation.

**VI. GENERAL GOOD AND WELFARE** – None

**VII. ADJOURNMENT**

Meeting Adjourned at 3:45 p.m.

John R. Reisel, Secretary  
CEAS Faculty

JRR  
Attachments

**INFORMAL REPORTS**

Office of Student Services – Todd Johnson

Fall 2014 Enrollment Summary - Total Enrollment 2,049 +3.9%, Undergraduate Enrollment 1,639 +5.5%, Graduate Enrollment 410 -1.9%. The increase in undergraduate enrollment is largely attributed to special (non-degree) students. 85 special students (primarily international guest students from Brazil and China) are enrolled for the fall semester. Detailed numbers can be found on the following page.

University of Wisconsin--Milwaukee

**Comparison of Enrollments to Date**

Student Limits Set: CEAS  
 Course Limits Set:

				Fall 2014						
				September 15, 2014						
				Prior Year To Date HC	Current Year To Date HC	Difference	% Difference	Prior Year Final HC	Ratio: Prior Year To Date / Final	
CEAS	UGRD	New Freshmen	Freshman	164	198	34	20.7%	163	100.6%	
			Sophomore	4	10	6	150.0%	4	100.0%	
			Total	168	208	40	23.8%	167	100.6%	
		Transfer Students	Freshman	6	4	-2	-33.3%	5	120.0%	
			Sophomore	32	33	1	3.1%	30	106.7%	
			Junior	39	51	12	30.8%	42	92.9%	
			Senior	21	36	15	71.4%	21	100.0%	
			Total	98	124	26	26.5%	98	100.0%	
			New Specials	Special	19	59	40	210.5%	19	100.0%
		Total		19	59	40	210.5%	19	100.0%	
		Reentry Students	Freshman	3	5	2	66.7%	3	100.0%	
			Sophomore	13	9	-4	-30.8%	12	108.3%	
			Junior	10	2	-8	-80.0%	11	90.9%	
			Senior	15	7	-8	-53.3%	15	100.0%	
			Special		1	1				
			Total	41	24	-17	-41.5%	41	100.0%	
		Continuing Students	Freshman	39	22	-17	-43.6%	39	100.0%	
			Sophomore	260	233	-27	-10.4%	259	100.4%	
			Junior	284	268	-16	-5.6%	283	100.4%	
			Senior	645	676	31	4.8%	645	100.0%	
	Special			25	25					
	Total		1,228	1,224	-4	-0.3%	1,226	100.2%		
	Total				1,554	1,639	85	5.5%	1,551	100.2%
	GRAD	New Graduates	Master	66	47	-19	-28.8%	66	100.0%	
			Doctoral	19	35	16	84.2%	19	100.0%	
			Non Degree	15	15	0	0.0%	15	100.0%	
			Total	100	97	-3	-3.0%	100	100.0%	
		Reentry Students	Master	1	3	2	200.0%	1	100.0%	
			Doctoral	6	11	5	83.3%	5	120.0%	
			Non Degree	1		-1	-100.0%	1	100.0%	
			Total	8	14	6	75.0%	7	114.3%	
		Continuing Students	Master	136	142	6	4.4%	138	98.6%	
Doctoral			169	150	-19	-11.2%	169	100.0%		
Non Degree			5	7	2	40.0%	5	100.0%		
Total			310	299	-11	-3.5%	312	99.4%		
Total				418	410	-8	-1.9%	419	99.8%	
Total				1,972	2,049	77	3.9%	1,970	100.1%	
Total				1,972	2,049	77	3.9%	1,970	100.1%	

Career Services – Juli Pickering

### **May 2014 Graduating Class Job Acceptance Statistics**

- **Civil Engineering:** 85% of respondents accepted a position related to their major \* Average Salary: \$48.8K \* Salary Range: \$40.5K - \$56K
- **Computer Engineering:** 67% of respondents accepted a position related to their major \* Average Salary: \$55K \*
- **Computer Science:** 88% of respondents accepted a position related to their major \* Average Salary: \$58.7K \*Salary Range: \$35K - \$95K
- **Electrical Engineering:** 92% of respondents accepted a position related to their major \* Average Salary: \$60.3K \* Salary Range: \$48K - \$71K
- **Industrial Engineering:** 75% of respondents accepted a position related to their major/planned to enroll in graduate school \* Average Salary: \$66K
- **Materials Engineering:** 75% of respondents accepted a position related to their major/planned to enroll in graduate school \* Average Salary: \$64K
- **Mechanical Engineering:** 93% of respondents accepted a position related to their major/planned to enroll in graduate school \* Average Salary: \$60.8K \* Salary Range: \$47K - \$75K

### **Fall Industry Expo**

A record **106** employers have registered to attend the Fall Industry Expo. Please encourage students to attend! Expo will be Friday, October 3, 2014, from 9:00am - 2:00pm in the Wisconsin Room of the Student Union. Faculty members are welcome and encouraged to attend! Many companies are seeking to partner further with the college through senior design projects, guest-speaking to classes and/or research areas.

### Curriculum Committee

No Report

### Graduate Program Subcommittee

No Report

### Academic Planning Committee – Prof. Misra

The APC met on September 5th for over two hours. Dean Peters presented an update on the status of recommendations that the Committee made over last academic year. He asked about formulating some guidelines for a possible advisory committee at the College level for promotion and tenure considerations. He also asked for developing a list of expectations from the department chairs, and evaluation mechanisms for curricula and the departments. The Committee talked about the current climate and decided to conduct a survey of the CEAS faculty that is done by someone from outside the College.

### Biomedical and Health Informatics – Prof. McRoy

No Report

### Graduate Faculty Committee – Prof. Dhingra

No Report

### Faculty Senate – Prof. Reisel

The Faculty Senate approved the Biomedical Engineering Department-Like Body proposal.



September 2014

Faculty and Staff Meeting

## **COLLEGE OF ENGINEERING AND APPLIED SCIENCE**



## **Welcome**

- **Advanced manufacturing:**
  - **Nathan Salowitz**, ME
- **Biomedical and health:**
  - **Ali Borji**, CS
  - **Vitaliy Rayz**, ME (joint appointment with MCW)
- **Energy and sustainability:**
  - **Rob Cuzner**, EE
  - **Jun Jie Niu**, MSE
  - **Lingfeng Wang**, EE (Associate Professor)
- **Water and environment:**
  - **Yin Wang**, CEE



## Promotions

- Professor
  - John Reisel, ME
  - Jin Li, CEE
- Associate Professor with tenure
  - Rani Elhajar, CEE
  - Troy Liu, CEE
  - Matt Petering, IME
  - Mahsa Ranji, EE
  - Chris Yuan, ME
- Academic Staff indefinite status
  - Mike Krauski



## Strategic Goals

1. Make CEAS an outstanding environment in which to learn and to work
2. Create a dynamic environment and infrastructure to enhance innovative research
3. Anticipate and respond to market demands in order to produce graduates who are prepared to address and adapt to the changing needs of the marketplace and society
4. Build partnerships with stakeholders and enhance awareness of CEAS strengths and accomplishments

## Academic Plan

- Research leads the way
  - Research growth and enhancement is the path to fulfilling the strategic goal of being top 100 College of Engineering
  - Grow externally funded research
  - Grow visible, well-regarded, impactful research
  - Grow prestigious, scholarly publications
  - Enhance visibility of our faculty
  - Grow PhD program

## Academic Plan

- Enhance the student experience
  - Attract, retain, and graduate increasing numbers of well prepared students
  - Create compelling new options, specializations, degrees
  - Engage the students in meaningful activities
    - Undergraduate research (including freshmen), engineering design, innovation and entrepreneurship
  - Enhance student organizations and other extra-curricular activities
  - Help with transition to upper level
    - Living learning communities
    - Study groups; peer mentoring
    - Involvement with departments, faculty, and upper class students
    - Early warning signs → connect with advisors



## Goals

- Research: Externally funded expenditures, Scholarly publications, Visible centers
- Students: Number of graduates/year, Graduation rate, Placement rate
- Faculty: Size, Editors, Fellows, Chairs, NAE
- Fund raising: Chairs, Fellowships, Scholarships, Capital

## Goals and Targets

- Top-100 College of Engineering
  - #131 in 2012 → **#124** in 2014 (USN&WR)
- Basis for US News and World Report Graduate Engineering Rankings
  - Quality assessment (40%)
    - Peer assessment (25%)
    - Recruiter (15%)
  - Student selectivity (10%)
    - Mean GRE quantitative (6.75%)
    - Acceptance rate (3.25%)
  - Faculty resources (25%)
    - Student to faculty ratios
      - Full-time PhD students/FTE (7.5%)
      - Full-time MS students/FTE (3.75%)
    - % of faculty in NAE (7.5%)
    - PhDs awarded (6.25%)
  - Research activity (25%)
    - Research expenditures (15%)
    - Research expenditures/FTE (10%)

## Goals and Targets

- At least 100 tenured/tenure-track faculty
  - Added **9** for 2014-15
  - Johnson Controls Endowed Chair offer pending
  - Total TTF of **70**
  - Search parameters (#, areas) for 2015-16 being determined
  - Working with university on request(s) for additional funding

## Goals and Targets

- Annual external research expenditures of at least \$25M
  - \$7M in 2011-12 → **\$3.8M** in 2013-14 (awards)
  - \$100K/TTF → **\$68K/TTF**
- Building forward
  - Key research centers/institutes in theme areas
  - Help each faculty member reach next “level of activity/excellence” and reward success
  - Strengthen partnerships
    - Internal to UWM, External universities, and Industry

Investigating mechanisms to track scholarly publication activity and impact as additional measures of research productivity

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## Goals and Targets

- 1,850 undergraduates, ↑retention, ↑placement
  - 1541 in 2012 → **1600** in 2014
    - Freshman (transfers) up to 208 (126) from 167 (98) last year
  - Increased number of BS graduates
    - 238 → **292**
  - First year retention: 82% overall, 75% in College
  - Freshman calculus placement: 69%
  - Most recent placement rate: 90%
  - Over 100 companies at 2014 Fall Industry Expo
- New programs, options, certificates
  - BS in biomedical in approval process
- Improve diversity of student population
- Enhance student experience
  - Administrative
  - In classroom
  - Outside classroom

*Growth is great, and needed, but does also create challenges and opportunities.*

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## Goals and Targets

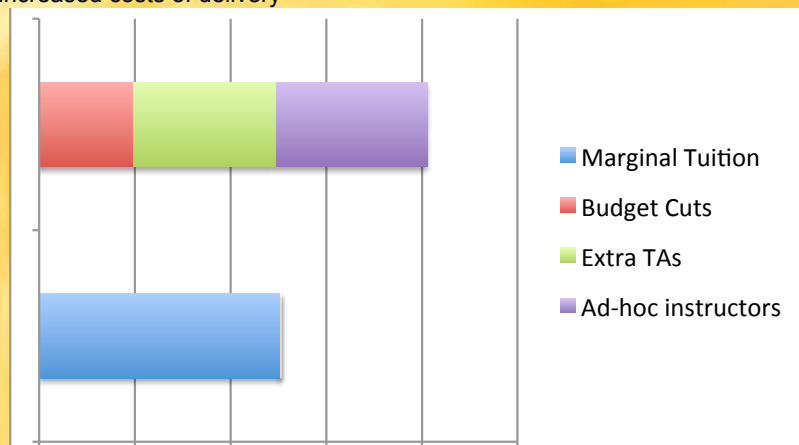
- 500 Masters students
  - 187 in 2012 → **211** in 2014
  - Professional masters market research underway
    - Plan for most growth in this area; course-based, so faculty efficient; leverage industry connections
- 350 PhD students
  - 185 in 2012 → **211** in 2014
  - Growth commensurate with faculty size and research funding
  - Competitive, multi-year offers are critical

## Goals and Targets

- Private fund-raising
  - \$12M goal for 7-year campaign
  - **\$390K** received in FY14
- Opportunities
  - Convert strong industry partnerships and connections into philanthropy
    - Named professorships, fellowships, lab naming
  - Strengthen alumni relationships
    - New development director (interviews underway)
    - Better connection with UWM alumni activities
  - Remember: our current students are our future alumni

## Budget Implications

Enrollment growth and retention have resulted in increased marginal tuition for college, which is great, but it has been more than consumed by budget cuts and increased costs of delivery



Excess costs, renovations, and upgrades were funded from one-time vacancy savings

## Structural Changes

- Biomedical Department-Like Body approved by Faculty Senate
- Sr. Associate Dean Searches underway
  - On-campus interviews in October
  - 2 full time positions with some restructuring:
  - More authority and responsibility to Chairs/ Departments
    - Workload
    - Budget
  - Additional help from faculty on part-time assignments

## Summary

- Faculty hiring was quite successful
- Enrollment growth is good
  - Several new initiatives in progress
- Must reenergize research activity
  - Good core activities to build on
  - Focus efforts at multiple scales
- Continue to strive for new resources
  - Self generated through growth
  - New infusions derived from our value added
  - Gifts in support of our mission