

Chairs' & Center Directors' Meeting Minutes

Date: September 22, 2008 (12:00 to 2:00 pm)

Location: EBU II – Room 443

Attendees: Abbaschian, Reza
Balandin, Alex
Barth, Matt
Bhanu, Bir
Boretz, Mitch
Dexter, Jim
Hartney, Pat
Lake, Roger
Mahalingam, Shankar
Matsumoto, Mark
Parker, Linda
Ravishankar, China
Rodgers, Victor (for Jerry Schultz)
Yan, Yushan

Absent: Bhuyan, Laxmi
Haddon, Robert
Norbeck, Joe
Payne, Tom
Schultz, Jerry

The agenda for the meeting is shown in Appendix 1.

1. Welcome – Request for Agenda Items from the Floor – Reza

Reza welcomed back the Chairs from the summer break. The following agenda items were added: Wired Project (Mitch), TA Allocations (Victor), and Instructional Equipment (Pat).

Reza mentioned that fire damaged one of BIEN's labs over the weekend but there were no injuries. The campus' emergency personnel did not know how to turn off the sprinklers which led to water damage in the lab. The MSDS labels on the entrances to BCoE labs were very helpful to the emergency personnel. Shankar pointed out that there was damage to Tom Stahovich's lab. Tim is compiling a damage report for BCoE. Reza sent out an email over the weekend to BCoE faculty describing the incident.

2. Minutes Approval - Pat

The minutes of the 9/8/08 Chairs/Directors meeting were unanimously approved.

3. College Meeting - Reza

Reza stated that this Fall's College Meeting is scheduled for October 27th. Chancellor White will attend this event and the meeting's schedule will permit time for BCoE faculty to interact with the new

Chancellor. Reza reiterated that his impressions are that Chancellor White is a dynamic, engaged leader. Department Chairs are asked to submit department highlights to Eilene by October 15th. These highlights should stress images and not text.

4. Chancellor's visit to CE-CERT – Reza

Reza stated that Chancellor White is scheduled to visit CE-CERT on October 28th. Visits to other BCoE centers and departments will be scheduled in the future.

5. Solar Initiative (and Wired Project) – Mitch

Matt stated that the Solar Initiative was comprised of three parts: training, research and application/development. BCoE is already working with researchers from Tohoku University and the Florida Solar Energy Center in these areas. The City of Riverside is expected to provide about \$500K/yr in funding for the initiative. Matt has been circulating a draft white paper that describes BCoE's solar capabilities. There will be visitors from Tohoku University in November to discuss solar technical issues with BCoE faculty. Reza mentioned that Chancellor White has Solar and Sustainability as focuses. On a related issue, Mark commented that UCR is the biggest user of water in Riverside.

Mitch distributed a handout that presented areas of Research Findings for the Wired project. Mitch suggested that we schedule two meetings early this quarter between grad student researchers (that worked on the Wired project) and BCoE faculty to discuss ideas on how to build the Wired concepts into graduate or undergraduate curriculums. These meetings could replace regularly scheduled grad student seminars.

6. Graduate Education – Mark

Mark distributed the latest Grad Student Recruitment Status report (dated 9/22/08). This report indicates that the total number of BCoE incoming grad students this year is about 153 (compared to 148 last year). There are 10 more domestic students than last year. There is no update on financial packages for grad students from the Grad Division. This week's Grad Student Orientation has been scheduled in one of the new Commons rooms and will include representatives from various UCR offices. Reza stated that we need to increase the grad student applicant pool to enhance BCoE's national ranking. There will be recruiting visits to Morgan State and perhaps Howard University this year to help identify diversity grad student candidates. BCoE has better diversity than other UC Colleges of Engineering and UCR in general. Shankar indicated that office (desk) space for incoming grad students is needed by departments. Reza responded that Tim is working on solutions.

4. Undergraduate Education - Ravi

Ravi stated that BCoE incoming Freshmen enrollment is mostly stable but we won't know the final number until the 3rd week of the term. Student Affairs is focusing on retention efforts including organizing groups to keep track of the number of study hours of group members (similar to Weight Watchers). Ravi stressed that faculty mentoring is very important to retention efforts and that BCoE undergrads should have regular contact with BCoE faculty. Student Affairs can provide assistance to departments but departments need to initiate these efforts. Departments should stress the advantages of Learning Communities in undergrad seminars, etc. Student Affairs may develop a Best Practices manual of these efforts.

5. Faculty Recruitment – Mark

Mark noted the draft general faculty recruitment and Energy/Materials recruitment ads attached to the agenda. The general ad is basically the same one used last year. The Energy/Materials applications will be screened by the MSE Committee which will send the top ones to the appropriate departments. Each department will use its own Search Committee to review these selected applications. It was noted that department Search Committees could review all Energy/Materials applications if they wanted. Shankar acknowledged that two out of these positions were directed towards Materials but he asked if the 3rd could have a broader focus. After discussion, it was decided that the ad's wording should not be changed since it was important to create a critical mass of Energy/Materials faculty. However, departments could argue for (outstanding) candidates that fall under a broader Energy focus. An alternative is that some of these (outstanding) candidates could be considered by departments that have their own searches. Alex noted that departments can replace their representatives on the MSE Committee. He will circulate the current composition of the MSE Committee to Chairs.

8. Other Items

Victor stated that the current TA Allocation formula to BCoE departments is unfair to start-up departments, like Bioengineering. Pat explained that 25% of the annual TA allocation is dependent on the number of incoming grad students but 75% is related to undergraduate workload FTE. The last version of the TA Allocation spreadsheet incorporates the last (annual) workload FTE figures published by UCR's Academic Planning and Budget (APB) Office. Unfortunately, these figures are for FY 06/07 which pre-dates BIEN's significant increase in undergraduate instruction. Pat stated that he is waiting for the latest workload FTE figures from APB which should be available this week. The updated spreadsheets will be sent to Chairs and MSO's.

Pat announced that this year's request for Instructional Equipment proposals will be sent to BCoE departments this week. However, the total amount of funding is not yet known due to the likelihood of budget reductions. Proposals will probably be due in November in anticipation that final FY 08/09 budget figures will be available late this calendar year.

Due to time constraints, department updates were postponed to the next Chairs/Directors meeting.



Chairs' & Center Directors' Meeting

September 22, 2008

Agenda

Engineering Building Unit II – Room 443

1. Welcome - Request for Agenda Items from the Floor Reza
2. Approval of Minutes from September 8, 2008 Meeting Pat
3. College Meeting – Save the Date: October 27th
Chancellor will be in attendance
Send Eilene Department Highlights by October 15th
4. Chancellor's visit to CE-CERT (scheduled for October 28th)
5. Riverside Solar Innovation Research Center Mitch
6. Graduate Education Mark
7. Recruitment Mark
8. Undergraduate Education Ravi
9. Department Updates
10. Other Topics

The next scheduled meeting will be
Monday, October 6, 2008

Please note: Meetings will be held in EBU II – Room 443

Position Announcement for Web Postings and Fliers



**MULTIPLE FACULTY POSITIONS
UNIVERSITY OF CALIFORNIA, RIVERSIDE
BOURNS COLLEGE OF ENGINEERING**

The Bourns College of Engineering at the University of California, Riverside invites applications for tenure-track or tenured faculty positions at the Assistant, Associate, or Professor Rank. The College is seeking highly qualified faculty members in all five departments: Bioengineering, Chemical and Environmental, Computer Science, Electrical, and Mechanical. Through these searches, the College is also seeking faculty members for the newly established Materials Science and Engineering program which integrates across all five departments. Individuals with vigorous research programs and demonstrated graduate student productivity are strongly encouraged to apply for the senior rank. Specific areas of interest are provided at www.engr.ucr.edu/facultysearch/.

We anticipate that the successful applicant will complement the highly motivated and entrepreneurial spirit of the College faculty, contributing meaningfully to the success of future teaching, research, and service accomplishments. Incumbents are expected to initiate and sustain strong sponsored research and graduate training programs.

The Bourns College of Engineering is proud of its faculty's accomplishments and rapid growth. The College currently has 85 faculty members, 1500 undergraduates, more than 380 graduate students, and more than \$32 million in annual research expenditures. The College is home to three interdisciplinary and multidisciplinary research centers: The Center for Environmental Research and Technology (CE-CERT), the Center for Research in Intelligent Systems (CRIS), and the Center for Nanoscale Science and Engineering (CNSE).

Search committees will begin reviewing applications as early as December 1, 2008. To apply please register through the weblink at www.engr.ucr.edu/facultysearch/ and submit the requested PDF files. For inquiries and questions, contact us at facultysearch@engr.ucr.edu.

The University of California, Riverside is an Equal Opportunity/Affirmative Action Employer.

**FACULTY POSITIONS
UNIVERSITY OF CALIFORNIA, RIVERSIDE
BOURNS COLLEGE OF ENGINEERING**

The Bourns College of Engineering at the University of California, Riverside invites applications for tenure-track or tenured faculty positions at the Assistant, Associate, or Professor Rank. The College is seeking highly qualified faculty candidates with excellent track record in the area of materials for clean energy conversion and storage. Examples of the specific research areas include fuel cells, solar cells, batteries, super-capacitors, and renewable hydrogen production and storage. The successful applicants will join one of the five academic departments: Bioengineering, Chemical and Environmental, Computer Science, Electrical, Mechanical, and be affiliated with the newly established Materials Science and Engineering program which integrates across all five departments. Individuals with vigorous research programs and demonstrated productivity are strongly encouraged to apply for the senior rank. More details are provided at www.engr.ucr.edu/facultysearch/.

Comment [MRM1]: This add will most likely be revised after the next Chairs' meeting. At least one Department has commented that they would like to see a broader research target.

We anticipate that the successful applicant will complement the highly motivated and entrepreneurial spirit of the College faculty, contributing significantly to the success of future teaching, research, and service accomplishments. Incumbents are expected to initiate and sustain strong sponsored research and graduate training programs.

The Bourns College of Engineering is proud of its faculty's accomplishments and rapid growth. The College currently has 85 faculty members, 1500 undergraduates, more than 380 graduate students, and more than \$30 million in annual research expenditures. The College is home to three interdisciplinary and multidisciplinary research centers: The Center for Environmental Research and Technology (CE-CERT), the Center for Research in Intelligent Systems (CRIS), and the Center for Nanoscale Science and Engineering (CNSE).

Comment [r2]: Mark, Do we add the Center for Bioengineering?

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**FACULTY POSITION
DEPARTMENT OF CHEMICAL AND ENVIRONMENTAL
ENGINEERING**

**University of California, Riverside
Bourns College of Engineering**

The Department of Chemical and Environmental Engineering at the University of California, Riverside invites applications for a tenure-track or tenured position in the areas of biotechnology/biochemical engineering. Applications are especially encouraged from individuals with research interest in biomaterials, bioenergy, biosensors, or environmental biotechnology. Applicants should have a distinguished academic record, exceptional potential to conduct world-class research, and a commitment to teach at both the undergraduate and graduate levels. A doctoral degree in Chemical engineering or a related field is required.

We anticipate that the successful applicant will complement the highly motivated and entrepreneurial spirit of the College faculty, contributing meaningfully to the success of future teaching, research, and service accomplishments. Faculty research activities are essential to the success of our program and as such new members are expected to initiate and sustain strong sponsored research and graduate training programs. People with vigorous research programs and demonstrated graduate student productivity are strongly encouraged to apply for the senior rank. Salary level will be competitive and commensurate with qualifications and experience.

The Bourns College of Engineering is proud of its faculty's accomplishments and rapid growth. Over the past five years, the numbers of faculty and undergraduates have nearly doubled; graduate student enrollment has increased six-fold, and research expenditures have more than tripled. The College currently has 85 faculty members, over 1500 undergraduates, more than 350 graduate students, and more than \$32 million in annual research expenditures. The College recently opened its Engineering II building and is expecting the opening of two additional buildings, Material Science and Engineering, and Engineering III in 2010 and 2013, respectively.

The search committee will review received applications beginning on 12/1/08 and will continue to receive applications until the positions are filled. To apply please register through the weblink at www.engr.ucr.edu/facultysearch/ and submit the requested PDF files. For inquiries and questions, please contact us at facultysearch@engr.ucr.edu.

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BCOE GRADUATE STUDENT RECRUITMENT STATUS: 2008-09 COHORT

Graduate Division Data as of September 22, 2008

Program	Apps	Admits	Accepts	Target	% of Target
BIEN	61	25	12	15	80.0%
CEE	116	50	23	22	104.5%
CS	453	121	51	52	98.1%
EE	470	119	50	40	125.0%
ME	120	32	17	22	77.3%
Total	1220	347	153	151	101.3%

Unit	Apps	Admits	Accepts	Target	% of Target
BCOE	1220	347	153	120	127.5%
CHASS	1191	353	216	194	111.3%
CNAS	1388	368	182	227	80.2%
DBS	37	12	3	4	75.0%
AGSM	363	152	81		
GSOE	2115	115	90	16	
Total	6314	1347	725	561	

Graduate Division Data as of September 22, 2007

Program	Apps	Admits	Accepts	Target	% of Target
BIEN	39	14	8	8	100.0%
CEE	113	45	20	20	100.0%
CS	335	90	42	35	120.0%
EE	318	94	45	35	128.6%
ME	98	54	33	23	143.5%
Total	903	297	148	121	122.3%

Graduate Division Data as of September 22, 2008

Program	International Students					
	2007		2008			
	Apps	Admits	Accepts	Apps	Admits	Accepts
BIEN	17	5	4	27	8	5
CEE	84	28	14	85	28	13
CS	276	60	26	407	93	33
EE	282	80	34	424	97	36
ME	76	43	25	93	21	11
Total	735	216	103	1036	247	98

Domestic Students

Program	2007				2008				
	Apps	Admits	Accepts	Apps	Admits	Accepts	Apps	Admits	Accepts
BIEN	22	9	4	34	27	7			
CEE	29	17	6	31	22	10			
CS	59	30	16	46	28	18			
EE	36	14	11	46	22	14			
ME	22	11	8	27	11	6			
Total	168	81	45	184	110	55			

All Students

Program	2007				2008				
	Apps	Admits	Accepts	Apps	Admits	Accepts	Apps	Admits	Accepts
BIEN	39	14	8	61	35	12			
CEE	113	45	20	116	50	23			
CS	335	90	42	453	121	51			
EE	318	94	45	470	119	50			
ME	98	54	33	120	32	17			
Total	903	297	148	1220	357	153			

5. Research Findings

A. Significant Elements of Innovation in California Companies

Added 9/18/08:

The “bright lines” from our surveys: the things we are seeing in the surveys and from our students. We should describe the findings here in section 5, and then our recommendations/follow-up go in section 6.

New engineers should have:

- Good research skills.
- The ability to communicate effectively with management and other stakeholders.
- Managerial skills: communication, delegation, follow-up.
- The ability to identify need within the organization and the market that the organization serves.
- Project management: intellectual “ownership,” financial.
- Passion about the work.
- An understanding of the regulatory environment: environmental, safety, etc.
- An understanding of ethical principles (plagiarism, research ethics, societal implications).
- Basic grasp of microeconomic principles.
- Knowledge of statistical process control, statistical quality control, and six-sigma.
- Ability to work in teams.

We can also insert selected ABET criteria here.

The ABET professional outcomes include:

1. An ability to function on multi-disciplinary teams.
2. An understanding of professional and ethical responsibility.
3. An ability to communicate effectively.
4. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
5. A recognition of the need for, and an ability to engage in, life-long learning.
6. A knowledge of contemporary issues.

Penn State study of 2006 found a need for:

- Project management.
- Communication and team skills.
- Quality management practices.
- Ethics.
- Economics and financial issues.