Chairs' & Center Directors' Meeting Minutes

Date: July 7, 2014 (12:00 to 2:00 pm)
Location: WCH – Room 443
Attendees: Abbaschian, Reza
Aguilar, Guillermo
Barth, Matt
Boretz, Mitch
Chrobak, Marek
Farrell, Jay
Garay, Javier
Haddon, Robert
Hartney, Pat
Najjar, Walid
Park, Hyle (for Bir Bhanu)
Ravi
Vafai, Kambiz

Absent: Balandin, Alex
Bhanu, Bir
Matsumoto, Mark
Myung, Nosang
Tan, Sheldon
Wang, Albert

The agenda for the meeting is shown in Appendix 1.

1. Welcome and call for agenda items - Reza
Reza welcomed Marek to the meeting. He has succeeded Laxmi Bhuyan as Chair of CSE. Bir has been appointed BIEN's Interim Chair. BIEN will be recruiting for a new Chair.
Reza stated that he expects next year to be a challenging and interesting year. He's appreciated the collegiality of the Chairs/Directors group.
BCOE graduated 95 PhDs, 50 MS and over 420 BS students this year. Most of these graduates were at BCOE's Commencement ceremony. There were over 1,000 attendees at BCOE's Commencement Reception.
Reza will be meeting with UCR's new Provost tomorrow and will present highlights of BCOE.
No items were added to the agenda.

2. Approval of Minutes - Pat
The revised minutes of the May 12th Chairs/Directors meeting were unanimously approved.

3. 14-15 Budget Allocations - Pat
Pat distributed a summary of BCOE's 2014-15 Perm Budget increases. These increases included $1.3M to cover faculty/staff salary and fringe benefit increases. Also, BCOE requested several new staff FTE in its proposal but is only being allocated 1.65 FTE. This new FTE includes 1 FTE for Maggie Souder's position (which was previously funded by BCOE), .40 FTE increase for BIEN's Grad Assistant and .25 FTE increase for CEE's Lab Manager. The total of these Perm staff allocations is $181K. The total number of new staff funded

by campus for all academic and non-academic units was 18.9 including 1 for CHASS, 4 for CNAS, 2 for the Med School and 4 for Public Policy.

4. 14-15 TA Allocations – Pat

Pat stated that in addition to new staff FTE, BCOE's Perm TA allocation is being increased by five FTE. This is the largest TA FTE increase in several years. On average, BCOE department/program TA funding will increase by about 16% next year. It was noted that CSE has problems finding enough TAs to cover all its courses. Reza suggested that graduate students from other BCOE departments, particularly ECE, may be able to TA some of CSE's lower level courses.

5. Faculty Lines – Reza

Reza announced that BCOE will receive five new faculty FTE next year and is authorized to recruit for nine positions. These positions are listed on an attachment to the agenda along with the original descriptions of these positions. Reza added that BCOE was authorized to search for 11 faculty last year and hired seven. The remaining four (senior level) positions couldn't be filled due primarily to lack of wet lab space. UCR is seriously considering converting several 2nd floor Bourns B dry labs to wet labs to mitigate BCOE's space problem. Reza stated that position descriptions for these new recruitments should be as flexible as possible so that hiring exceptions are not needed. In response to a question, Reza commented that Target of Excellence (T.O.E.) hire requests can be processed as long as adequate research space is available. Jay will discuss the pending T.O.E. hire with Nosang.

6. Undergraduate Education – Ravi

Ravi noted that BCOE's current Perm budget includes seven Student Advisor staff FTE. In order to have the same major/advisor ratio as CNAS, BCOE would need an additional 6.5 staff FTE.

Ravi called attention to the attachment to the agenda that lists the number of incoming freshmen and transfer students per BCOE program. The total number of incoming freshmen is 546 and includes California residents and non-residents. This number is about 100 less than last year's total but includes 40 BS/MS students. Also included in this 546 figure is 38 change-of-major students from other UCR colleges. Usually, the number of outgoing BCOE change-of-major students equals the number of incoming change-of-major students but this is not the case this year. Students requesting to transfer into BCOE this year must meet BCOE's minimum AIS score, and be Calculus and English ready. Since this year's number of incoming major changes is high, Ravi has informed the campus that BCOE will not accept any more incoming change-of-major students. They will now need to follow the standard change-of-major process for enrolled students. The total number of transfer students is 130. The incoming freshmen and transfer student figures do not yet include losses due to 'summer melt' which in past years averaged about 9%. In response to a question, Ravi stated that BCOE now requires 'stealth majors' to provide two-term advance notice that they intend to change majors.

Next, Ravi stated that Chinese student interest in the BCOE/UNEX Program is high but is uneven across departments. Most requests are for ECE this year. This unevenness is likely due to lack of guidance given to recruiting agents in China. The final number and distribution of these students should be available in about one month.

Lastly, Ravi has been asked to give presentations on BCOE's new course scheduling system for students (A+) to campus. The campus may be interested in using this system. Ravi will need to find a grad student to work on this program since the student that developed it graduated this year.

7. Other Matters

Reza mentioned that BCOE had more grad student applications and new grad student enrollments than any other UCR college/school this year. He has asked the Budget Office to share a portion of the grad student

application fees with BCOE to help support the burden of reviewing the significant number of grad student applications in BCOE.

Ravi stated the campus may want to start reviewing individual undergrad applications in the future, similar to UCLA and UCB. This will put a significant burden on BCOE Student Affairs staff.

Javier noted the recent $12M DOE grant to UCR included several MSE faculty. It is believed that this (4 year) grant is the largest grant ever received by UCR.

In response to a request, Reza reported that besides the new Provost, UCR has made several other senior appointments recently including the new VC for Budget and Planning (Maria Anguiano) , new VC for Business and Administrative Services (Ron Coley), and Interim VC for Academic Personnel (John Trumble). Also, Mike Miller, Director of Physical Plant has retired.

In response to a question, Pat reported that BCOE's Laptop Requirement is being implemented starting Fall 2014 for incoming freshmen and transfer students. Pat will send out a link to a new BCOE webpage to Chairs/Directors that describes this new requirement.

Lastly, Pat noted that Cheryl Gerry will be leaving CEE for a higher level position in CNAS (FAO for the departments of Biochemistry, Nematology, Plant Pathology & Microbiology and Statistics).

No other matters were discussed.

UNIVERSITY OF CALIFORNIA
RIVERSIDE
BOURNS COLLEGE OF ENGINEERING

Chairs' & Center Directors' Meeting

July 7, 2014

Agenda

Winston Chung Hall – Room 443

1.	Welcome - Request for Agenda Items from the Floor	Reza
2.	Approval of Minutes from May 12, 2014 Meeting	Pat
3.	14-15 Budget Allocations	Pat
4.	14-15 TA Allocations	Pat
5.	Faculty Lines	Reza
6.	Undergraduate Education	Ravi
7.	Other Matters	

Future Meeting Dates

2014

~~Monday, July 7~~
Monday, August 11
Monday, September 8
Monday, September 22
Monday, October 6
Monday, October 20
Monday, November 3
Monday, November 17
Monday, December 15

2015

Monday, January 5
Friday, January 23
Monday, February 2
Friday, February 20
Monday, March 2
Monday, March 16
Monday, March 30
Monday, April 13
Monday, April 27
Monday, May 11
Friday, May 29
Monday, June 8
Monday, June 22
Monday, July 6
Monday, July 20

Below are the support allocations for your unit as a result of the 2013-14 Planning and Budget Process:

PERMANENT 2014-15 ALLOCATIONS/COMMITMENTS

Fixed Costs*

$554,000	Estimated funding to cover the salary augmentation of faculty and staff positions.
$355,000	Estimated funding to cover the employee benefits augmentation including the marginal cost associated with the salary increases of faculty and staff and general program cost increases.
$365,000	Estimated funding to cover the retirement benefit augmentation associated with the increased cost from 12.65% to 15%.
$1,274,000	**Subtotal**

Strategic Investments

$130,625	Salary, employee benefits, retirement contribution, and $5,000 in permanent support for a 1.00 FTE Analyst IV (TC 7237) Facilities/Safety Coordinator. The position is currently held by Margaret Souder @ 1.00 FTE and paid on cash; therefore the allocation amount is based on actuals.
$25,970	Salary, employee benefits, retirement contribution, and $2,000 in permanent support for a 0.40 FTE Administrative Assistant III (TC 4722). The position is currently held by Reneisha Wilkes @ 0.60 FTE, therefore the allocation amount is based on actuals to increase the position to 1.00 FTE.
$24,069	Salary, employee benefits, retirement contribution, and $1,250 in permanent support for a 0.25 FTE Associate Development Engineering (TC 7182). The position is currently held by Kathleen Cocker @ 0.75 FTE, therefore the allocation amount is based on actuals to increase the position to 1.00 FTE.
$180,664	**Subtotal**
$1,454,664	**Total Permanent Allocations**

*This represents the permanent value of the fixed costs, any temporary allocations required in 2014-15 to cover these costs will be made effective the date of the salary action.

TEMPORARY 2014-15 ALLOCATIONS/COMMITMENTS

NONE

Faculty Recruitments / BCOE 2014/2015

Position No.	Position Title	Department	Level
1	Medical Devices and biomedical engineering	BIEN (Chair)	Full
2	Air Quality and Atomospheric Transformations	CEE/CE-CERT	Asst.
3	High Performance Scientific Computing	CSE	Open
4	Network System and Security	CSE	Open
5	Big Data	CSE	Open
6	Phase Change Memory Devices	ECE(CEN)	Asst.
7	3D Stacked Integration	ECE(CEN)	Asst.
8	Materials Characterization: Thermal and Electrical	ME/MSE	Open
9	Advanced Manufacturing/Systems Engineering	ME/CEE	Open

Approved Faculty FTE for 14/15

1. Medical Devices and Biomedical Engineering (1 FTE full and Chair, BIEN)

The University of California is located in one of the richest areas in the nation in terms of medical device companies. In fact, over 2,000 biomedical products companies are located in Southern California and California's biomedical companies' revenues for 2008 were an estimated $75.9 billion. With the emergence of the accredited School of Medical, the University has a tremendous opportunity to contribute to this major industrial section of California. Bioengineering has recently hired a junior faculty member in this area and, another faculty member in the area of medical device research would strengthen and catalyze BCOE's focus in this area, by, perhaps developing a Center for Medical Devices as well as establishing new, creative areas of research in this important field.

2. Air Quality and Atmospheric Transformations (1 FTE Assistant, CEE and CE-CERT)

Air quality monitoring and control and climate change are one of the strategic research areas of CE-CERT and BCOE. CE-CERT is in the process of expanding its atmospheric chamber laboratory by creating a national research user facility available for use by U.S. industry, universities, other national laboratories, state and local governments, and the scientific community to directly address many of the issues relating particulate matter (PM), ozone, and atmospheric transformations, modeling, and monitoring. The proposed hire will fill a void created by the retirement of Professor Joseph Norbeck. A new hire with expertise in the anticipated needs areas of atmospheric regional modeling (focused on PM), atmospheric PM mechanistic modeling, life cycle energy systems and GHG analysis, and or research instrumentation development will advance discovery and provide important synergies. In addition, this new hire will provide the overall campus with an important technology complement as we pursue a major research initiative in sustainable communities.

3. Network System and Security (1 FTE open, CSE)

The plan includes search for a senior position in the area to replace a loss of one senior faculty in January 2013. We propose to create a Center on Secure Networked Cyber-systems (NSS), which will be led by the senior person as its Director. The area of building secure networked systems spans a broad area of topics including the design and building of intelligent cryptosystems, secure wireless networks, detecting and preventing the spread of malware etc. Networked systems and security are integral to new areas such as cyber-physical systems. These systems require various components to be networked effectively to transport sensitive information (such as health data) is of paramount importance across heterogeneous devices, in real time. The core areas of networking and security also play a critical for homeland security, energy and water management (e.g., smart grid, water regulation and control) and managing medical devices (e.g., implanted sensors). The emergence of social networks has also increased the need for security and privacy controls at almost all levels.

4. **High Performance Scientific Computing (1 FTE open, CSE)**

This position covers scientific computing, computational materials, and high-performance computing (HPC). This is a highly interdisciplinary research area that will involve all the departments of the college of engineering in addition to researchers from CNAS and College of Medicine. Recruiting a senior person in the area will provide leadership to go after large grants from NSF, DOE, and NIH. A number of faculty members in COE and CNAS are already involved in research that deal with machine designs, environmental sciences, atmospheric research, oil exploration, and fire-spread models, etc. All these UCR professors need computer science collaboration that we are unable to provide at the moment. Recruiting a senior person in this area will produce high degree of collaboration with others to develop large research projects and programs. This hire is particularly important since the department has lost five faculty members during the last few years; three retirement and two separations. As a result the faculty strength in the department has now fallen down to 21 from 25.

5. **Big Data (1 FTE open, CSE)**

One of the emerging areas called "Big Data" deals with key challenges in data-driven decisions and analyses, data-intensive computing, search, and scalable information storage. Along with many other applications, research may study how public health records, tweets, and Web search can help spot disease outbreaks and track the progress of epidemics. A senior faculty hired in this category can be an asset not only to the COE, but also to the CNAS, School of Medicine, and Division of Biomedical Sciences. We propose to develop a Center on Biomedical Informatics that will be headed by a senior person, whose expertise will be in "big data" area. The Director of the Center will provide leadership in interdisciplinary research with the medical school and attract big research funding.

6. **Phase Change Memory Devices(1 FTE, junior ECE and CEN)**

Traditional DRAM memory technology is facing scaling difficulties as chip lithography shrinks. Phase change memory (PCM) technology offers higher switching speed, lower power consumption, and better scaling compared to traditional DRAM. PCM, like FLASH, is a non-volatile memory technology, but offers much higher reliability. Companies like Intel, Micron, and STMicroelectronics are already marketing PCM technology.

7. **3D Stacked Integration(1 FTE Assistant, ECE and CEN program)**

3D stacked integrated architectures enable heterogeneous integration of cores, memories and analog devices. It provides better communication bandwidth for different cores and modules, which lead to better performance and power reductions. 3D stacked integration opens many new emerging applications from mobile, cloud computing to bio and health engineering.

8. **Materials Characterization: Thermal and Electrical (1 FTE open, ME and MSE)**

Solutions to society's growing healthcare and energy problems will depend on the development of advanced materials. The ME department's current materials expertise comprises the synthesis of nano-materials and powders, the synthesis of novel bulk materials, and the characterization of the mechanical

properties of materials. However, the department needs one junior faculty with expertise in the characterization of the thermal and electrical properties of materials. This expertise is essential for developing the energy applications of new materials.

9. Advanced Manufacturing/Systems Engineering (1 FTE open, ME and CEE)

As articulated by President Obama in his 2014 State of the Union address, advanced manufacturing continues to be a strategic priority for the nation, due in large part to the significant potential it offers for job creation and increased economic competitiveness. Sustained growth and competitiveness of the U.S. manufacturing sector will require concurrent focus on development of innovative new manufacturing techniques and practices that further increase performance and efficiency, reduce cost and development times, and broaden the manufacturing base. UCR ME and CEE are well-positioned to contribute in this regard, given its historic strength in the synthesis and processing of novel materials as well as its growing strength in the development of fundamentally-enabling new manufacturing and chemical processes. However, faculty expertise is lacking with a Systems Engineering approach, which is needed to produce processes that go beyond the workbench into a prototype or pilot plant and specifically tailored to satisfy industrial needs and capacities. Ultimately, systems engineering seeks to integrate multiple scientific and engineering concepts at the conception of the final product to increases the probability of the whole system's success, with reduced risk and reduced total-life-cycle cost.

Major	FR		TR
Bioengineering (BIEN)	68	78	11
Bioengineering BS+MS (BEBM)	10		
Chemical Egr. (CHEN)	54	57	27
Chem Egr BS+MS (CHBM)	3		
Environmental Egr (ENEN)	25	27	6
Enviro. Egr. BS+MS (ENBM)	2		
Computer Egr (CEN)	70	4	5
Computer Egr BS+MS (CNBM)	2		
Computer Science (ENCS)	83	111	25
Comp. Sci. BS+MS (CSBM)	14		
Bus. Informatics (BUNF)	14		1
Electrical Egr (ELEN)	55	58	21
Electrical Egr BS+MS (EEBM)	3		
Limited (ENLM)	0		3
Materials Sci & Eng (MSE)	21	21	4
Mechanical Egr (MCEN)	116	122	27
Mech. Egr. BS+MS (MCBM)	6		
Total	**546**		**130**
	BS+MS 40		