

## **Chairs' & Center Directors' Meeting Minutes**

**Date:** April 20, 2009 (12:00 to 2:00 pm)

**Location:** EBU II – Room 443

**Attendees:** Abbaschian, Reza  
Barth, Matt  
Balandin, Alex  
Boretz, Mitch  
Dexter, Jim  
Lake, Roger  
Mahalingam, Shankar  
Matsumoto, Mark  
Parker, Linda  
Payne, Tom  
Ravishankar, Chinya  
Schultz, Jerry  
Yan, Yushan

**Absent:** Bhanu, Bir  
Bhuyan, Laxmi  
Haddon, Robert  
Hartney, Pat  
Norbeck, Joe

The agenda for the meeting is shown in Appendix 1.

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

Discovery Day and Space Science and Engineering Day this weekend went very well. Attendance was greater than expected. It was good to see so much excitement about the College. Ravi and Jun Wang should be congratulated for their efforts. Space Science and Engineering Day had about 600 people. No items added to agenda.

### **2. Approval of Minutes from April 6, 2009 Meeting**

Approved unanimously as revised.

### **3. Commencement - Reza**

BCOE will have its own commencement on Monday, June 15, at 6 p.m. Target is to finish by 7:30. It will be combined graduate and undergraduate commencement. If we have a reception for students beforehand, it would have to be around 3, to give students time to go and line up before the ceremony, and to give families time to go get their seats. We could see 3,000 people. It would be a lot of people to have outside. Therefore, we suggest instead a reception afterward, starting at 8, using the EBU II patio. If we announce it well ahead of time, people won't make conflicting dinner reservations.

We need good faculty attendance at commencement because it will be just BCOE there, no CNAS faculty at ours. Mark predicts good turnout; BCOE faculty usually are pretty good at turning out.

Jim suggested playing a video of the ceremony at the reception, so people can see themselves graduate. Ravi suggests making a DVD of the ceremony. Jim said we can do that, but not on the spot – it would have to be sent later. Or we can make it downloadable.

We will begin planning where each department will set up for its reception after commencement. Departments are free to plan their own activities, such as special awards or honors for students and faculty.

We will have about 300 people graduating (250 undergraduate, 50 graduate).

#### **4. Aware Sensor Systems (May 11-12) and Tech Horizons (May 13) – Ravi and Jim**

TechHorizons is timed to coincide with Riverside's Tech Week. Our theme this year is Aware Sensor Systems. There will be a technical workshop sponsored by NSF, ARO, and ONR focusing on video networks. This will be an academic-level conference with about 80-90 people. Most are invited, and the content will be highly technical. That will run May 11-12.

The TechHorizons event will be May 13. We have two keynotes plus talks by faculty, demonstrations, and posters, and a panel discussion. We are hoping to do tours, too.

Poster session will be open to all topics, not just aware systems. All faculty are invited to encourage their students to submit posters.

The two keynotes: Ian Aykildez from Georgia Tech, in computer networking, and one from Arun Hampapur from IBM. The panel will have a UC Irvine professor plus practitioners from law enforcement, etc.

UCR faculty and students may attend the open sessions of the technical workshop, but the working group breakouts will be closed. (We can try to make accommodations to UCR faculty who wish to participate, but the registrations are pretty well set.) Reza commented that it could be educational for the students to see how the breakout groups function.

Reza said we should have plenty of UCR grad students at TechHorizons, for the sessions, not just the reception.

#### **5. Council of Advisors (June 5) - Reza**

Meeting will be June 5-6. Last year, departments gave research overviews, plus descriptions of their missions and goals. This year, the advisors would like to see some focused presentations in research areas of strength. We can have two or three of these, about 30 minutes each. Yushan has been suggested. Roger suggests Amit Roy-Chowdhury on video recognition – that could be a follow-up/summary of TechHorizons. Jerry suggests a topic in biophotonics: Anvari or Park. Mechanical could do something in

air pollution with Marko Princevac or Heejung Jung. With Western Digital on the board, Sakhrat Khizroev could be a good choice.

Lab tours might be part of the agenda.

Council of Advisors members include Western Digital, Bourns, Northrop-Grumman, civil engineering companies, national labs. We are slowly changing the composition.

## **6. Departmental Updates**

MSE: Alex Balandin has rewritten the bylaws for MSE. He will send it to CCGA this week, along with a response to questions.

Master's program: The proposal is ready to go after getting input from Jerry Schultz. Income projections have been adjusted.

CSE: Our top faculty candidate turned us down. We don't know where we are on our second candidate.

ME: One of our students, a senior, died in a motorcycle accident about two weeks ago. Lots of students and faculty attended the funeral.

A course materials fee for ME has been approved. Pat and Lin helped quite a bit. It begins in the fall.

ME's board of advisors meeting is Friday, April 24. Reza and Linda will participate.

CE-CERT: Did a 5-year review and board of advisors in March. The 5-year review is back already, overall pretty good. The comments were constructive.

Solar initiative is producing a lot of proposals.

CEE: Graduate program will be reviewed this year. Yushan wanted two reviewers for chemical and two for environmental, but it looks like there will be only three.

Teaching assignments: Yushan is trying to edit down within a week. It has been difficult.

Our first choice of a faculty candidate turned us down. The department is examining its options for moving forward. There are strong feelings in the department about not being able to get another faculty member hired this year; teaching loads and graduate enrollment are rising. Environmental engineering enrollment is rising especially fast; we are 1½ to 2 years from having all of the experimental classes being too full. There is a physical limit to how many people can be at each workstation in the lab classes.

CEE is working toward a materials fee, but it is not approved yet. Yushan will ask Shankar about the process.

## **7. Graduate Education/Recruitment - Mark**

Mark reported that Grad Division is reporting (as of Wednesday, April 15) we are at 75% of target with 98 accepts. BCOE figures as of this morning from Gradsys: 115 accepts, 45 pending. Our target is 130. Of the pendings, 30 are MS and 15 are PhD. Relative to last year, we are down about 50 offers. We have used 57 of our 72 NRTs, so we still have NRTs available. EE requested 5-10 more, and Mark has approved that. Computer Science has exceeded its target for this year.

Nominally, April 15 is the deadline. Last year, only 75% were complete by then.

Shankar asked whether we can increase the offer for 2-3 domestic students. Mark said that once they accept, you can't change it. But before acceptance, you can. After May 1, we lose control over that.

## **8. Undergraduate Education - Ravi**

Discover Day this weekend had triple the attendance of last year: 1,000 RSVPs and about 750 attended. It went well, and Ravi thanks the faculty for participating.

We have annual major advising coming up. This is a yearly event where every student is required to attend an advising session. Advising staff talks to them, and the UG advisor for each department talks to them. We have a problem because one student affairs advisor had to leave early on maternity leave, and one will go on leave pretty soon. This will give us challenges in the fall with a large number of freshmen. Therefore, we will ask the departments to do more with annual major advising next year.

A faculty-faculty exchange with the community colleges is scheduled for Friday, May 1. BCOE faculty RSVPs are very low. We give talks and have breakouts to discuss issues of mutual interest: research engagement, articulation. It helps us get their best students referred here. CNAS and BCOE are doing this jointly. Ravi will send out a reminder. About 50 community college professors have RSVP'd.

Freshman recruitment is up. Total SIRs are up 30% from last year. We could have 900 freshmen this year; 700 is more feasible. Environmental Engineering has a 300% increase. Nominally, the campus enrollment should be down 10% this year, but there is nothing announced about how this will be enforced. One possibility is sticking to the SIR deadline of May 1. That might stretch to May 15.

Accommodating these students will be a challenge without more faculty, more space, and more equipment. We will feel this most acutely when the students start taking core curriculum in about two years.

Ravi said it might be time to be more selective. Executive Committee suggested accepting "engineering prep" students, requiring them to take certain indicator courses before they are fully admitted. Last time we tried to be more selective, enrollment plummeted.



# Chairs' & Center Directors' Meeting

**April 20, 2009**

## **Agenda**

Engineering Building Unit II – Room 443

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|-----|---|------|
| 1.  | Welcome - Request for Agenda Items from the Floor | Reza |
| 2.  | Approval of Minutes from April 6, 2009 Meeting    | Pat  |
| 3.  | Commencement                                      | Reza |
| 4.  | Aware Sensors Systems – May 11-12                 | Ravi |
| 5.  | Tech Horizons – May 13                            | Jim  |
| 6.  | Council of Advisors – June 5                      | Reza |
| 7.  | Departmental Updates                              |      |
| 8.  | Graduate Education/Recruitment                    | Mark |
| 9.  | Undergraduate Education                           | Ravi |
| 10. | Closed Session                                    |      |
|     | Budget Discussions                                | Reza |

The next scheduled meeting will be

**Monday, May 4, 2009**

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

# **GRADUATE PROGRAM IN MATERIALS SCIENCE AND ENGINEERING**

## **UNIVERSITY OF CALIFORNIA – RIVERSIDE**

### **BYLAWS**

BCOE Approval: January 16, 2008

Graduate Council Approval: May 20, 2008

#### **I. OBJECTIVE**

Materials Science and Engineering (MS&E) is concerned with the study of the structure, properties, processing and applications of materials. The MS&E program aims to provide fundamental knowledge for understanding of materials with the objective of predicting, modifying, and tailoring their properties to achieve enhanced performance of the devices based on these materials. The mission of the interdepartmental MSE graduate program is to deliver graduate education and training that will lead to the awarding of MS and PhD degrees in MSE. The program provides coordinated and coherent training that will allow students to obtain a core background in the fundamental materials subjects with the flexibility to pursue a chosen area of specialization in the materials and engineering field. The program's focus on energy, nanotechnology and sustainability make it unique among materials departments and programs.

The MSE program offers the Master of Science (M.S.) degree in Materials Science and Engineering through the Thesis (Plan I) and Non-Thesis (Plan II) options, and advance graduate education and training leading to the Doctor of Philosophy (Ph.D.) degree in Materials Science and Engineering.

#### **II. MEMBERSHIP**

- 1) Membership Criteria: The MSE founding faculty members recognize that participation in a graduate program can take many forms. Criteria for membership can include 1) maintenance of an active funded research program in MSE field and providing support for graduate students; 2) teaching courses that are required for the operation of the instructional component of the graduate program; 3) contributing to training and mentoring of MSE graduate students; 4) taking an active role in administration of the MSE program; 5) continued participation in MSE program activities by Emeritus faculty, and 6) support of MSE research endeavors by non-academic senate members. Other contributions that are

expected of all MSE participating faculty to support continued membership in MSE include: chairing or serving on MSE committees; providing and grading questions for the Preliminary (Comprehensive) Examinations; serving on Ph.D. Oral Qualifying Examinations and Dissertation Committees; participation in elections and attendance at the faculty meetings.

The approval of new members to the MSE program is vested in the Membership Committee. Faculty members requesting membership in the MSE program should send their *Curriculum Vitae* to the MSE Program Director who will forward the document to the Membership Committee for consideration.

- 2) Membership Retention: The membership status of MSE faculty will be reviewed every three years by the MSE Membership Committee. Faculty whose membership is to be evaluated will be notified in Fall of the academic year and may be asked to supply a brief summary of their MSE related activities to the committee by the end of the Fall quarter. The Membership Committee will complete its evaluations by the end of Winter quarter of the same academic year. The MSE faculty members who fail to achieve renewal of their membership may appeal that decision. The appeal should be submitted in writing and forwarded to the Program Director for presentation to the Graduate Program Committee and reaching the final decision.
- 3) Termination of Membership: MSE graduate program faculty members who no longer wish to participate in the program may request termination of their membership at any time by sending a memo to the Program Director.

### **III. ORGANIZATION AND ADMINISTRATION**

The administration of the program and its activities will be vested in the Program Committee consisting of one member from each participating department and a Program Director who will serve as chair.

#### **A. MSE Program Director**

The MSE Program Director (Chair of MSE Program) is responsible for the overall direction and organization of the MSE Program. The Program Director is the chief officer and spokesperson for MSE. The program Director represents MSE at the Dean of Engineering's meetings with the Department Chairs and will maintain liaison with the chairs of the participating department outside of BCOE.

The appointment of the Program Director will be in accordance with the regulations of UCR Graduate Council. The Director will be appointed by the Chancellor for a term of three years upon the recommendation of the Dean of Engineering and the Dean of Graduate Division. A Nominating Committee approved by the Membership Committee will solicit the names of nominees for a Program Director from the MSE participating faculty. The faculty will be polled for comments on the nominees. All received comments will be kept confidential. The Nominating Committee will forward at least two names to the Dean of Engineering and the Dean

of Graduate Division along with the comments. The Graduate Dean, in consultations with the Dean of Engineering, will forward his/her recommendation to the Chancellor who makes the appointment.

## **B. Graduate Advisor**

The MSE Graduate Advisor is in charge of the overall academic advising of students in the MSE graduate program. The specific responsibilities of the Graduate Advisor include: (i) chairing the Graduate Program Committee; (ii) coordinating the recruitment activities for the Graduate Program; (iii) offering advising sessions for the graduate students; (iv) holding orientation sessions for the incoming graduate students on various aspects of the graduate study; (v) ensuring completion of annual reviews of the student performance; (vi) counseling graduate students without a research advisor (e.g. M.S. Plan II students); and (vii) revising the Graduate Student Handbook.

The Graduate Advisor will be nominated by the MSE faculty through the election called by the Director every three years. The nominated Graduate Advisor will be approved by the Dean of Engineering and appointed by the Dean of the Graduate Division. Assisted by the Graduate Program Assistant, the Director and the Graduate Advisor will administer the graduate program under the policies established by the Graduate Program Committee.

## **C. Faculty Advisor**

The Faculty Advisors will advise students on curriculum planning, research, examination preparation and provide MS thesis and/or PhD dissertation supervision. The Graduate Advisor generally will assign each incoming student a temporarily Faculty Advisor after consultations with faculty members. It is expected that within the first year of study each graduate student will have a formally assigned permanent Faculty Advisor for his/her graduate degree program. Selection of a permanent Faculty Advisor is initiated by request of the student and approved by the desired faculty member and the Graduate Program Committee.

## **D. COMMITTEES**

### **1. Graduate Program Committee**

The administration of the MSE graduate program and its activities will be vested in the Graduate Program Committee consisting of one representative from each department participating in MSE program and the MSE Graduate Advisor who will serve as a chair of the committee. The representatives to the MSE Graduate Program Committee are appointed by the chairs of the participating departments at the request of the MSE Program Director according to the procedures regulating service assignments at the corresponding departments.

The Graduate Program Committee will be responsible for overseeing courses, curriculum, admission, degree requirements, administration of student assistantship awards and other policy matters. Specific responsibilities include the following.



- Review and recommend action on proposed new graduate courses and changes in existing graduate courses;
- Recommend any changes in the M.S. and Ph.D. degree requirements and progress requirements to the MSE participating faculty;
- Review applications for admission and make admission recommendations to the Graduate Division at UCR;
- Review and approve petitions for advancement to candidacy for Ph.D. degree;
- Approve recommended appointments for the Graduate Examination Committees and Thesis and Dissertation Committees, and transmit these to the Dean of the Graduate Division;
- Recommend candidates for graduate fellowships;
- Review TA evaluations from students and faculty.

A graduate student representative will be selected by the students to provide input on matters pertaining to graduate course work, degree requirements and other student concerns. This student's role is to serve as a liaison between the faculty and students. This student representative will not be a member of the committee and will not have voting privileges but he/she will be invited to all Graduate Program Committee meetings, except during discussions of special student records and funding decisions.

## **2. Membership Committee**

The Membership Committee is made up of the Graduate Program Committee and the MSE Program Director. Its functions are specified in Sections II and III.

## **3. M.S. Comprehensive Examination Committee**

The committee to administer the M.S. Comprehensive Examination will be selected by the Graduate Program Committee and approved by the MSE Program Director.

## **4. Ph.D. Graduate Examination Committee**

The responsibility of the Ph.D. Graduate Examination Committee will be to administer a comprehensive written examination for the Ph.D. degree. Specific duties will include (i) prepare questions for the examination; (ii) administer the examination; (iii) determine the outcome (Pass or Fail) for each student; and (iv) recommend remedial actions for Ph.D. student who do well overall in the written examination but show deficiencies in a specific subject.

The Graduate Examination Committee will consist of a minimum of three MSE faculty members appointed by the MSE Graduate Advisor. The committee members should normally be voting members of the Academic Senate. Any exceptions must be supported by a memo of justification from the student's faculty advisor and must be approved by the Graduate Program Committee and the Graduate Dean.

## **5. M.S. Thesis Committee**

For each M.S. student who selected Plan I (Thesis Option) the M.S. Thesis Committee is to be formed after the permanent Faculty Advisor has been chosen. The M.S. Thesis Committee is responsible for the academic guidance and evaluation of the student performance. A primary task of the committee is to determine whether or not the student's M.S. thesis is acceptable toward fulfilling the requirements of the M.S. degree in MSE.

The M.S. Thesis Committee consists of the student's Faculty Advisor, who serves as the committee chair, and two additional MSE participating faculty members who are nominated by the student's faculty advisor and approved by the Graduate Program Committee. All committee members should be able to provide guidance and judge the quality of the thesis research. After review of the nominations the Graduate Dean will appoint the M.S. Thesis Committee on behalf of the Graduate Council. Emeriti faculty can serve on the Thesis Committee. If an Emeritus professor would like to serve as a chair of the committee then normally a co-chair will be appointed.

## **6. P.D. Dissertation Committee**

The Ph.D. Dissertation Committee consists of a minimum of three UCR Academic Senate members, who are MSE participating faculty, in addition to the student's Faculty Advisor who chairs the committee. All committee members should be able to provide guidance and judge the scholarship of the dissertation research. Membership of the committee should be nominated by the student's Faculty Advisor, approved by the Graduate Program Committee, and appointed by the Dean of the Graduate Division. Emeriti faculty can serve on the Dissertation Committee. If an Emeritus professor would like to serve as a chair of the committee then normally a co-chair will be appointed.

The specific responsibilities of the Ph.D. Dissertation Committee include (i) supervision of the dissertation research; (ii) review and approval of the written dissertation; (iii) administration and evaluation of the oral dissertation defense; and (iv) making a recommendation to the Graduate Division whether or not a Ph.D. degree should be conferred to the candidate.

## **E. MEETINGS**

Faculty meetings will be held at least once a year. The Program Director may call a special meeting of the program as deemed necessary or desirable by the Graduate Program Committee. A group of five or more MSE faculty members may also petition the Program Director to call a special meeting to discuss program issues.

## **F. QUORUM**

For all issues that require a vote, a quorum is achieved when votes are received from 50% of the eligible members. Passage of issues requires the support of a simple majority. Voting may be done by E-mail ballot. In the absence of a quorum any number of MSE faculty members present shall be sufficient to adjourn to a newly identified meeting date.

## **G. AMENDMENTS**

All amendments and revisions must be submitted to Graduate Council for review and approval. Passage of amendments to bylaws must satisfy the quorum rules indicated above.

FRESHMEN	Applicants		Admits		SIRS		
	4/16/2009	BS + (BS+MS)	4/17/2008	Increase	4/16/2009	4/17/2008	Increase
MAJOR							
Bioengineering	492		399	23%	457	364	26%
Business_Informatics	64		65	-2%	48	56	-14%
Chemical_Engineering	302		322	-6%	334	284	18%
Chemical_Engineering_BS+MS	99	401		25%	17		0
Computer_Engineering	539		573	-6%	440	431	2%
Computer_Science	415		540	-23%	494	431	15%
Computer_Science_BS+MS	245	660		22%	40		1
Electrical_Engineering	501		433	16%	437	356	23%
Environmental_Engineering	169		140	21%	228	122	87%
Environmental_Engineering_BS+MS	114	283		102%	114		2
Materials_Science_and_Engineering	320		317	1%	316	297	6%
Mechanical_Engineering	773		907	-15%	933	796	17%
Mechanical_Engineering_BS+MS	342	1115		23%	36		1
TOTALS							
BS + (BS+MS)	4375		3696	18%	3894	3137	24%
BS+MS Only	800				207		4

Based on GradSIS: 4/20/2009

Program	Status	MS				PhD				Totals			
		Res	NR	Int'l		Res	NR	Int'l		Res	NR	Int'l	All
BIEN	Accept	1	0	0		3	0	0		4	0	0	4
	Decline	1	1	0		6	1	0		7	2	0	9
	Pending	0	0	0		0	0	0		0	0	0	0
	In Process	0	0	1		0	0	0		0	0	1	1
CEE	Accept	0	1	2		1	1	14		1	2	16	19
	Decline	1	1	0		3	3	10		4	4	10	18
	Pending	0	0	1		1	0	3		1	0	4	5
	In Process	0	0	0		0	0	1		0	0	1	1
CPSC	Accept	3	0	12		7	4	21		10	4	33	47
	Decline	3	1	7		4	5	12		7	6	19	32
	Pending	1	0	22		0	0	1		1	0	23	24
	In Process	0	1	9		1	0	0		1	1	9	11
ELEN	Accept	1	0	9		4	2	21		5	2	30	37
	Decline	3	0	0		5	0	13		8	0	13	21
	Pending	2	0	4		1	1	2		3	1	6	10
	In Process	1	0	0		0	0	1		1	0	1	2
MCEN	Accept	3	0	0		3	0	2		6	0	2	8
	Decline	0	1	0		1	0	1		1	1	1	3
	Pending	2	0	3		0	0	1		2	0	4	6
	In Process	0	0	0		0	0	0		0	0	0	0
BCOE	Accept	8	1	23		18	7	58		26	8	81	115
	Decline	8	4	7		19	9	36		27	13	43	83
	Pending	5	0	30		2	1	7		7	1	37	45
	In Process	1	1	10		1	0	2		2	1	12	15

**2009-10 BCOE GRADUATE RECRUITMENT TARGETS**
**2009-10 CAMPUS TARGETS**

Dept	M.S.	Ph.D.	Total	Accepts	% of Target	College	Total	To Date	% of Target
BIEN	5	10	15	3	20.0%	BCOE	130	98	75.4%
CEE	2	18	20	18	90.0%	CHASS	201	174	86.6%
CSE	10	30	40	38	95.0%	CNAS	231	134	58.0%
EE	15	30	45	31	68.9%	DBS	4	3	75.0%
ME	2	8	10	8	80.0%	GSOE	16	38	NR
Subtotal	34	96	130	98	75.4%	Subtotal	566	409	72.3%

**Graduate Division Data as of April 16, 2009**

International Students									
Program	Apps			Admits			Accepts		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
BIEN	15	27	28	5	7	0	4	4	0
CEE	83	85	114	26	26	29	16	11	15
CS	271	406	438	38	89	71	7	36	23
EE	274	424	428	46	77	48	16	31	25
ME	73	92	68	36	10	8	21	4	2
Total	716	1034	1076	151	209	156	64	86	65

Domestic Students									
Program	Apps			Admits			Accepts		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
BIEN	19	30	32	9	13	12	1	6	3
CEE	28	31	22	17	22	12	7	9	3
CS	55	46	56	15	27	31	3	15	15
EE	37	43	38	14	15	18	8	6	6
ME	21	23	18	8	3	9	3	0	6
Total	160	173	166	63	80	82	22	36	33

Total Students									
Program	Apps			Admits			Accepts		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
BIEN	34	57	60	14	20	12	5	10	3
CEE	111	116	136	43	48	41	23	20	18
CS	326	452	494	53	116	102	10	51	38
EE	311	467	466	60	92	66	24	37	31
ME	94	115	86	44	13	17	24	4	8
Total	876	1207	1242	214	289	238	86	122	98

Unit	Apps		Admits		Accepts		One Year Percent Change		
	2008	2009	2008	2009	2008	2009	Apps	Admits	Accepts
BCOE	1207	1242	289	238	122	98	2.9%	-17.6%	-19.7%
CHASS	1133	1256	283	309	106	112	10.9%	9.2%	5.7%
CNAS	1324	1399	299	305	118	134	5.7%	2.0%	13.6%
DBS	35	48	7	8	0	2	37.1%	14.3%	#DIV/0!
AGSM	278	366	82	83	35	21	31.7%	1.2%	-40.0%
GSOE	179	184	70	58	41	38	2.8%	-17.1%	-7.3%
Total	4156	4495	1030	1001	422	405	8.2%	-2.8%	-4.0%