

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

**Date:** March 23, 2009 (12:00 to 2:00 pm)

**Location:** EBU II – Room 443

**Attendees:** Abbaschian, Reza  
Balandin, Alex  
Barth, Matt  
Boretz, Mitch  
Dexter, Jim  
Hartney, Pat  
Matsumoto, Mark  
Parker, Linda  
Payne, Tom  
Ravishankar, Chinya  
Rodgers, Victor (for Jerry Schultz)  
Yan, Yushan

**Absent:** Bhanu, Bir  
Bhuyan, Laxmi  
Haddon, Robert  
Lake, Roger  
Mahalingam, Shankar  
Norbeck, Joe  
Schultz, Jerry

The agenda for the meeting is shown in Appendix 1.

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

No new items were added to the agenda.

Reza commented that several Chairs were on travel and unavailable for this meeting.

### **2. Minutes Approval - Pat**

The revised minutes of the 3/9/09 Chairs/Directors meeting were unanimously approved as submitted.

### **3. Departmental Websites - Jim**

Jim reported that the black color featured on many BCOE's websites is being transitioned to dark blue and will eventually be changed to conform to UCR's official blue color. CEE's revised website was delayed but will be sent to Jim today for transfer to UCR's new Content Management System (CMS). EE's website was the first BCOE website to move towards the UCR standard and will be integrated into CMS by the end of the fiscal year. BIEN's website is updated regularly and is well designed. Jim will help BIEN to transfer this website to CMS. Reza reminded Chairs that Jim works for departments and he is there to help them with their websites. Jim mentioned that 58% of hits to BCOE websites are through Internet Explorer but 37.5% are through Firefox. He noted that some of ME's webpages don't appear

correctly using Firefox so these will need to be fixed. Also, Jim noted that 50% of the reported problems with BCOE's website were related to dead links. Most of these dead links have been corrected so that dead link errors are now around 0.7%. Matt reported that CE-CERT's webpages will transition to CMS by this summer. MSE's webpages are being worked on by Judy. It was noted that James Weaver, a postdoc working with David Kisailus, is very good at website design. The problem with using him to help design websites is that it is difficult to pay him for work above his postdoc appointment salary. Alex noted the recent email problem in BCOE. Evidently an EE student unwittingly gave his email login and password to a professional spammer. This spammer attempted to send several million spam emails through BCOE servers using this student's email account. When this occurred, Gmail and other email services blacklisted BCOE which caused problems for legitimate BCOE email delivery. John is working on solutions including rate-limiting outgoing email to 500 per hour per account.

#### **4. Sabbatical & Lecturers - Reza**

Reza stated that he is approving sabbatical leave requests for next fiscal year but there is no guarantee of lecturer funding for sabbatical replacements. If lecturer funding is limited next year, departments may need to have faculty take on more teaching responsibilities.

#### **5. Masters of Engineering - Tom**

Tom remarked that the draft proposal for BCOE's On-line Masters of Engineering degree program has been sent out to Chairs for review. The Data Mining specialization included in the proposal has been tabled by CSE due to concerns about faculty payments and the possibility that faculty participation may be mandatory in the future. It was felt that CSE faculty weren't fully informed of the differences between the On-line MS Engr program and regular BCOE Masters degree programs. As such, a "dummy" specialization will be included in the revised proposal. Reza reminded Chairs that most of the funds generated by this On-line program will be used for faculty fees for course development/instruction and graduate student support. Tom reported that CSE will have an Instructional Media room available starting today. This room will be equipped with a computer, camera, microphone and software for developing on-line course content. It was noted that the Naval Surface Weapons Center (NSWC) is interested in on-line degree programs. Lastly, Reza stated that BCOE's on-line program will include participation from UNEX and/or AGSM.

#### **6. NSF Engineering Research Centers - Mitch**

Mitch reported that NSF sent out the RFP for Engineering Research Center (ERC) proposals last week, which was earlier than expected. NSF expects to make four awards through this RFP. Unlike previous ERC solicitations, NSF has specified two (of the four) research areas: "Complex, Coupled Physical Civil Infrastructure Systems under stress" and "Energy Systems for a Sustainable Future." Research areas for the other two awards are open. New NSF requirements include the participation of at least one international partner and curriculum development. Small and large companies must be involved. Also, institutional participants are limited to the lead institution plus four core partners. Other participants can be classified as "universities providing affiliated faculty." According to NSF, UCR is classified as a minority institution for this solicitation. The NSF Program Manager has offered to review BCOE's 3 Tier draft in advance of proposal submission. There is no limit to the number of pre-proposals submitted by an institution. Pre-proposals will be due on 7/15/09. Full proposals will be due in January 2010. BCOE should be able to develop a proposal in response to the Energy Systems for a Sustainable Future area.

There are other research areas that BCOE faculty will likely propose. Mitch indicated that NSF has yet to respond to BCOE's Science Technology Center (STC) proposal.

#### **7. NEW UCR Grantsmanship Workshop Series - Mitch**

Mitch stated that Jane Schultz in the Office of Research (OR) and his peers in CNAS and CHASS will be offering a four-part Grantsmanship workshop series to faculty, post-docs and grad students. Three of the workshops will focus on ways to identify proposal opportunities and how to write responsive proposals. The fourth workshop will be directed at dissertation research proposals. Mitch envisions offering these workshops every other week each quarter (or every other quarter). There is no cost to offer these workshops and there will be no cost to attendees. Descriptions and schedules of these workshops will eventually be on OR's website. It was noted that these workshops respond to the curriculum development requirement of BCOE's Wired grant.

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

Mark distributed the latest available summary of BCOE grad student applications, admits and acceptances as of 3/17/09. 133 offers have been sent so far this year compared to 172 at this time last year. Domestic student offers are about the same as last year. Mark commented that there are another 50 offers in the queue. Mark also distributed charts presenting the percentages (by BCOE department) of MS and PhD students that have left without degrees or have graduated (with MS or PhD degrees). Mark noted that BCOE's graduation rate is approximately 60% (within 10 years) which is comparable to the national average. Also, he noted that BCOE's graduation results have improved after 2005. Mark distributed a table that presented TOEFL Requirements at departments of Electrical Engineering at 10 academic institutions. BCOE's minimum TOEFL scores are the same as UCI, UCD and Georgia Tech but are relatively low in comparison with most of these other institutions. It was noted that BCOE should consider raising its minimum TOEFL requirements.

#### **9. Undergraduate Education – Ravi**

Ravi distributed the latest summary of freshmen applications and admits (as of 3/20/09). To date, BCOE's admits increased by 37% from last year. Included in this increase are 101 BS/MS admits this year. Ravi noted that these figures do not yet include referral students. Ravi expects BCOE's total incoming Freshmen class to be at least as large as last year's incoming class. Ravi expects to have the same information for Transfer students by the next Chairs meeting. Ravi wants to add the requirements for the BS/MS degree program on the application next year.

Next, Ravi noted that the Title V grant will be supporting its second quarter of internships. Also, there will be a meeting on 5/1/09 to bring together UCR faculty with faculty from local Community Colleges. Lastly, the effort that would allow BCOE students to substitute COE's tech writing class for the English 1C requirement is on hold due to resistance from CNAS faculty.

#### **10. Closed Session – Budget Discussions**



# Chairs' & Center Directors' Meeting

**March 23, 2009**

## **Agenda**

Engineering Building Unit II – Room 443

- |     |   |       |
|-----|---|-------|
| 1.  | Welcome - Request for Agenda Items from the Floor | Reza  |
| 2.  | Approval of Minutes from March 9, 2009 Meeting    | Pat   |
| 3.  | Departmental Websites                             | Jim   |
| 4.  | Sabbaticals and Lecturers                         | Reza  |
| 5.  | Masters of Engineering                            | Tom   |
| 6.  | NSF Engineering Research Centers                  | Mitch |
| 7.  | NEW UCR Grantsmanship Workshop Series             | Mitch |
| 8.  | Graduate Education/Recruitment                    | Mark  |
| 9.  | Undergraduate Education                           | Ravi  |
| 10. | Closed Session                                    |       |
|     | Budget Discussions                                | Reza  |

The next scheduled meeting will be

**Monday, April 6, 2009**

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

**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	0	0.0%	BCOE	130	15	11.5%
CEE	2	18	20	3	15.0%	CHASS	201	45	22.4%
CSE	10	30	40	4	10.0%	CNAS	231	16	6.9%
EE	15	30	45	6	13.3%	DBS	4	1	25.0%
ME	2	8	10	2	20.0%	GSOE	16	5	NR
Subtotal	34	96	130	15	11.5%	Subtotal	582	95	16.3%

**Graduate Division Data as of March 17, 2009**

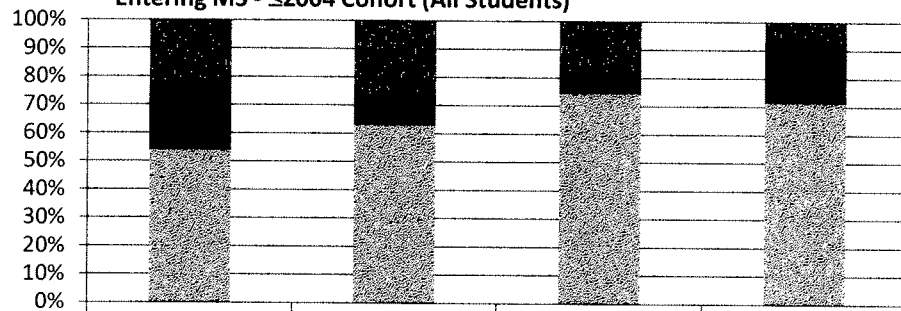
International Students									
Program	Apps			Admits			Accepts		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
BIEN	14	27	28	2	3	0	0	0	0
CEE	83	85	112	26	24	25	5	0	3
CS	271	404	432	23	30	26	0	0	1
EE	273	424	422	16	51	23	3	10	6
ME	72	91	67	32	5	1	8	1	0
Total	713	1031	1061	99	113	75	16	11	10

Domestic Students									
Program	Apps			Admits			Accepts		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
BIEN	17	28	28	6	13	11	0	1	0
CEE	28	31	22	17	17	12	1	1	0
CS	53	42	56	14	17	26	0	1	3
EE	37	38	34	7	11	2	1	2	0
ME	22	17	18	5	1	7	1	0	2
Total	157	156	158	49	59	58	3	5	5

Total Students									
Program	Apps			Admits			Accepts		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
BIEN	31	55	56	8	16	11	0	1	0
CEE	111	116	134	43	41	37	6	1	3
CS	324	446	488	37	47	52	0	1	4
EE	310	462	456	23	62	25	4	12	6
ME	94	108	85	37	6	8	9	1	2
Total	870	1187	1219	148	172	133	19	16	15

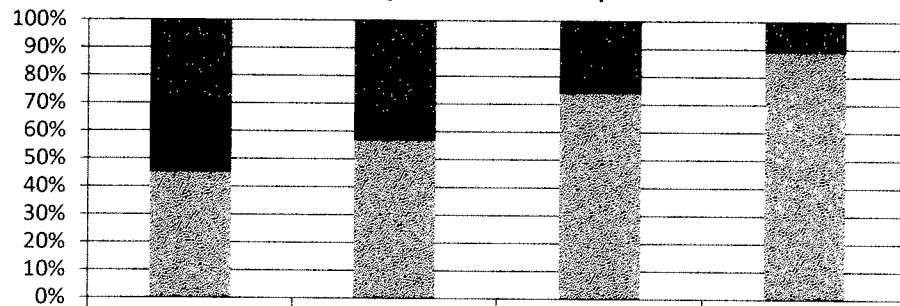
Unit	Apps		Admits		Accepts		One Year Percent Change		
	2008	2009	2008	2009	2008	2009	Apps	Admits	Accepts
BCOE	1187	1219	172	133	16	15	2.7%	-22.7%	-6.3%
CHASS	1105	1230	236	266	24	45	11.3%	12.7%	87.5%
CNAS	1304	1380	221	217	16	16	5.8%	-1.8%	0.0%
DBS	34	47	5	8	0	1	38.2%	60.0%	#DIV/0!
AGSM	240	331	65	53	19	13	37.9%	-18.5%	-31.6%
GSOE	155	161	44	22	20	5	3.9%	-50.0%	-75.0%
Total	4025	4368	743	699	95	95	8.5%	-5.9%	0.0%

**Entering MS - ≤2004 Cohort (All Students)**



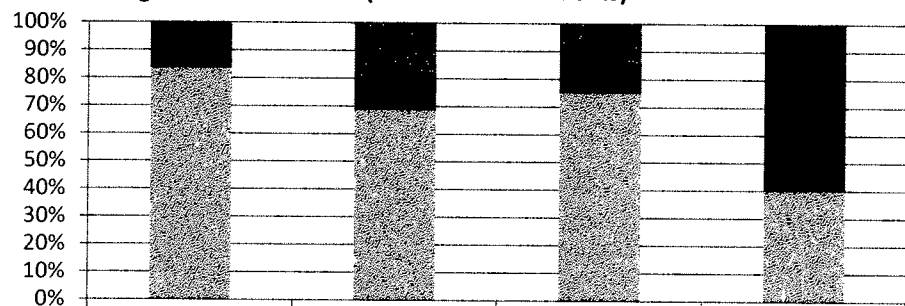
	CEE	CS	EE	ME
■ Left without degree	6	38	8	1
■ Expected Graduate - Ph.D.	3	2	1	0
■ Graduate - Ph.D.	3	12	2	2
■ Expected Graduate - M.S.	0	0	0	1
▨ Graduate - M.S.	14	88	32	10

**Entering MS - ≤2004 Cohort (Domestic Students)**



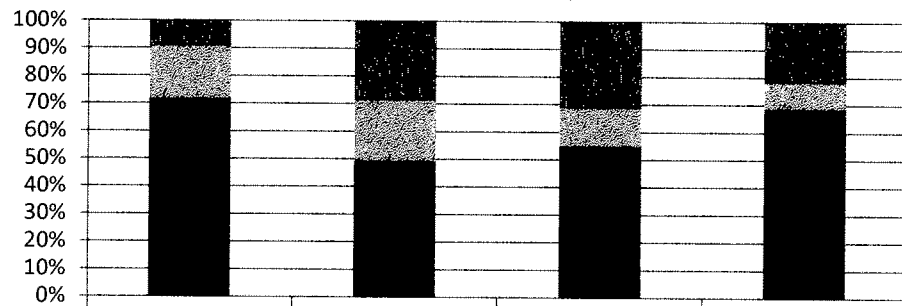
	CEE	CS	EE	ME
■ Left without degree	6	23	5	1
■ Expected Graduate - Ph.D.	3	2	1	0
■ Graduate - Ph.D.	2	4	0	0
■ Expected Graduate - M.S.	0	0	0	0
▨ Graduate - M.S.	9	38	17	8

**Entering MS - ≤2004 Cohort (International Students)**



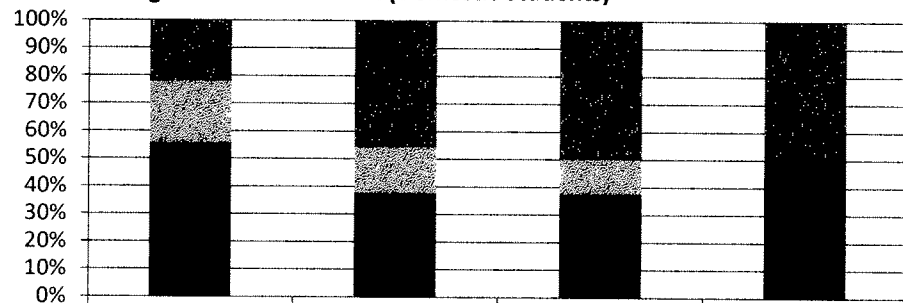
	CEE	CS	EE	ME
■ Left without degree	0	15	3	0
■ Expected Graduate - Ph.D.	0	0	0	0
■ Graduate - Ph.D.	1	8	2	2
■ Expected Graduate - M.S.	0	0	0	1
▨ Graduate - M.S.	5	50	15	2

**Entering PHD - ≤2004 Cohort (All Students)**



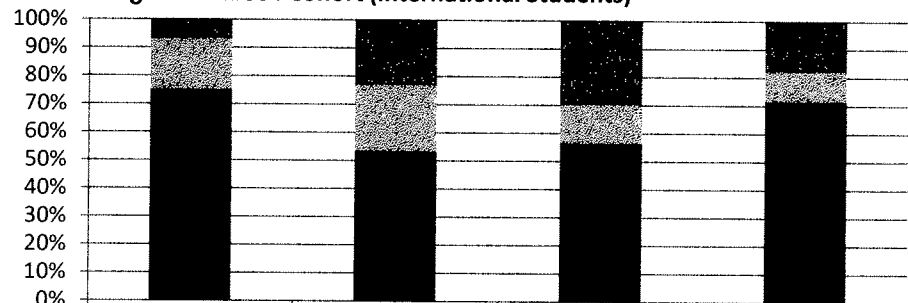
	CEE	CS	EE	ME
■ Left without degree	5	54	32	7
■ Expected Graduate - M.S.	0	0	0	0
▨ Graduate - M.S.	10	41	14	3
■ Expected Graduate - Ph.D.	4	14	7	7
■ Graduate - Ph.D.	34	78	49	15

**Entering PHD - ≤2004 Cohort (Domestic Students)**



	CEE	CS	EE	ME
■ Left without degree	2	22	4	2
■ Expected Graduate - M.S.	0	0	0	0
▨ Graduate - M.S.	2	8	1	0
■ Expected Graduate - Ph.D.	0	4	2	2
■ Graduate - Ph.D.	5	14	1	0

**Entering PHD - ≤2004 Cohort (International Students)**



	CEE	CS	EE	ME
■ Left without degree	3	32	28	5
■ Expected Graduate - M.S.	0	0	0	0
▨ Graduate - M.S.	8	33	13	3
■ Expected Graduate - Ph.D.	4	10	5	5
■ Graduate - Ph.D.	29	64	48	15

**Bioengineering**

2007-2008 (All Students)

Entering as M.S. Students		
Number	5	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	3	60%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	1	20%
Left without degree	1	20%
Entering as Ph.D. Students		
Number	19	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	1	11%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	18	89%
Left without degree	0	0%

**Chemical & Environmental Engineering**

2005-2008 (All Students)

Entering as M.S. Students		
Number	9	100%
Graduate - M.S.	2	22%
Expected Graduate - M.S.	2	22%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	3	33%
Left without degree	2	22%
Entering as Ph.D. Students		
Number	69	100%
Graduate - M.S.	1	1%
Expected Graduate - M.S.	1	1%
Graduate - Ph.D.	1	1%
Expected Graduate - Ph.D.	61	88%
Left without degree	5	7%

**Computer Science**

2005-2008 (All Students)

Entering as M.S. Students		
Number	35	100%
Graduate - M.S.	5	14%
Expected Graduate - M.S.	23	66%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	3	9%
Left without degree	4	11%
Entering as Ph.D. Students		
Number	112	100%
Graduate - M.S.	6	5%
Expected Graduate - M.S.	4	4%
Graduate - Ph.D.	1	1%
Expected Graduate - Ph.D.	95	85%
Left without degree	6	5%

**Electrical Engineering**

2005-2008 (All Students)

Entering as M.S. Students		
Number	46	100%
Graduate - M.S.	21	46%
Expected Graduate - M.S.	19	41%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	3	7%
Left without degree	3	7%
Entering as Ph.D. Students		
Number	106	100%
Graduate - M.S.	2	2%
Expected Graduate - M.S.	1	1%
Graduate - Ph.D.	4	4%
Expected Graduate - Ph.D.	90	85%
Left without degree	9	8%

**Mechanical Engineering**

2005-2008 (All Students)

Entering as M.S. Students		
Number	17	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	10	59%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	6	35%
Left without degree	1	6%
Entering as Ph.D. Students		
Number	45	100%
Graduate - M.S.	2	4%
Expected Graduate - M.S.	5	11%
Graduate - Ph.D.	3	7%
Expected Graduate - Ph.D.	30	67%
Left without degree	5	11%

**Bioengineering**

2007-08 (Domestic Students)

Entering as M.S. Students		
Number	5	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	3	60%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	1	20%
Left without degree	1	20%
Entering as Ph.D. Students		
Number	9	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	1	11%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	8	89%
Left without degree	0	0%

**Chemical & Environmental Engineering**

2005-08 (Domestic Students)

Entering as M.S. Students		
Number	6	100%
Graduate - M.S.	1	17%
Expected Graduate - M.S.	1	17%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	2	33%
Left without degree	2	33%
Entering as Ph.D. Students		
Number	21	100%
Graduate - M.S.	1	5%
Expected Graduate - M.S.	0	0%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	19	90%
Left without degree	1	5%

**Computer Science**

2005-08 (Domestic Students)

Entering as M.S. Students		
Number	23	100%
Graduate - M.S.	4	17%
Expected Graduate - M.S.	13	57%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	2	9%
Left without degree	4	17%
Entering as Ph.D. Students		
Number	43	100%
Graduate - M.S.	4	9%
Expected Graduate - M.S.	2	5%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	32	74%
Left without degree	5	12%

**Electrical Engineering**

2005-08 (Domestic Students)

Entering as M.S. Students		
Number	19	100%
Graduate - M.S.	7	37%
Expected Graduate - M.S.	8	42%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	1	5%
Left without degree	3	16%
Entering as Ph.D. Students		
Number	25	100%
Graduate - M.S.	1	4%
Expected Graduate - M.S.	0	0%
Graduate - Ph.D.	1	4%
Expected Graduate - Ph.D.	18	72%
Left without degree	5	20%

**Mechanical Engineering**

2005-08 (Domestic Students)

Entering as M.S. Students		
Number	11	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	6	55%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	4	36%
Left without degree	1	9%
Entering as Ph.D. Students		
Number	9	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	2	22%
Graduate - Ph.D.	1	11%
Expected Graduate - Ph.D.	4	44%
Left without degree	2	22%

**Bioengineering**

2007-08 (International Students)

Entering as M.S. Students		
Number	0	#DIV/0!
Graduate - M.S.	0	#DIV/0!
Expected Graduate - M.S.	0	#DIV/0!
Graduate - Ph.D.	0	#DIV/0!
Expected Graduate - Ph.D.	0	#DIV/0!
Left without degree	0	#DIV/0!
Entering as Ph.D. Students		
Number	10	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	0	0%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	10	100%
Left without degree	0	0%

**Chemical & Environmental Engineering**

2005-08 (International Students)

Entering as M.S. Students		
Number	3	100%
Graduate - M.S.	1	33%
Expected Graduate - M.S.	1	33%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	1	33%
Left without degree	0	0%
Entering as Ph.D. Students		
Number	48	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	1	2%
Graduate - Ph.D.	1	2%
Expected Graduate - Ph.D.	42	88%
Left without degree	4	8%

**Computer Science**

2005-08 (International Students)

Entering as M.S. Students		
Number	12	100%
Graduate - M.S.	1	8%
Expected Graduate - M.S.	10	83%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	1	8%
Left without degree	0	0%
Entering as Ph.D. Students		
Number	69	100%
Graduate - M.S.	2	3%
Expected Graduate - M.S.	2	3%
Graduate - Ph.D.	1	1%
Expected Graduate - Ph.D.	63	91%
Left without degree	1	1%

**Electrical Engineering**

2005-08 (International Students)

Entering as M.S. Students		
Number	27	100%
Graduate - M.S.	14	52%
Expected Graduate - M.S.	11	41%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	2	7%
Left without degree	0	0%
Entering as Ph.D. Students		
Number	81	100%
Graduate - M.S.	1	1%
Expected Graduate - M.S.	1	1%
Graduate - Ph.D.	3	4%
Expected Graduate - Ph.D.	72	89%
Left without degree	4	5%

**Mechanical Engineering**

2005-08 (International Students)

Entering as M.S. Students		
Number	6	100%
Graduate - M.S.	0	0%
Expected Graduate - M.S.	4	67%
Graduate - Ph.D.	0	0%
Expected Graduate - Ph.D.	2	33%
Left without degree	0	0%
Entering as Ph.D. Students		
Number	36	100%
Graduate - M.S.	2	6%
Expected Graduate - M.S.	3	8%
Graduate - Ph.D.	2	6%
Expected Graduate - Ph.D.	26	72%
Left without degree	3	8%



## TOEFL REQUIREMENTS

School	Program	Test	Minimum	Notes
MIT	EECS	Paper	600	The Department will grant an automatic waiver to any student whose first language is English, any student who has been studying or working in the US for two or more years, or whose undergraduate institution uses English as the language of instruction.
		Computer	250	Research Assistants typically work 30 hours per week while taking two courses per term.
		iBT	100	Teaching Assistants usually work 25 hours per week and may take two subjects per term.
UC Berkeley	EECS	Paper	570	If you have completed at least one year of full-time academic course work with grades of B or better in residence at a U.S. university, you do not need to take a standardized test. Instead, you must submit an official transcript from the U.S. university.
		Computer	230	
		iBT*	88	
UCLA	EE	Paper	560	<b>All admitted international applicants</b> are required, upon arrival at UCLA, to take the <i>UCLA English as a Second Language Placement Examination</i> before being permitted to register.
		Computer	220	Depending on the results of the ESLPE, you may be required to complete English as a Second Language courses beginning in your first term at UCLA. <b>Admission is canceled for those who do not pass the ESLPE.</b>
		iBT	87	Writing: 25, Speaking: 24, Reading: 21, Listening: 17
UC Irvine	ECE	Paper	550	Those planning to teach must also pass the speaking portion of the exam with a minimum score of 26 to establish TA eligibility.
		Computer	213	Students who receive a 26 or above will no longer be required to take one of the other approved oral English proficiency exams – i.e., the TSE, SPEAK, or TOEP.
		iBT	80	TAs are paid at a higher rate, but must pay a portion of their fees and nonresident tuition.
UC Davis	ECE	Paper	550	The minimum scores expected are 500 on the verbal section and 700 on the quantitative section.
		Computer	213	All international TAs are required to take the SPEAK test. You must sign up for the exam in person at 17 Wellman Hall.
		iBT	80	
Michigan	EECS	Paper	560	The Official Rackham Graduate School admission letter will indicate under "condition for admission", if applicants are required to have their English re-evaluated by taking the Academic English Evaluation (AEE) upon their arrival to campus before classes begin.
		Computer	220	Most new students who do not have an undergraduate degree from an English-medium institution are required to take the AEE.
		iBT	84	
Georgia Tech	ECE	Paper	550	The Graduate Professional Communications Program (GPCP) has established a cohesive program to improve the communication skills of graduate students in ECE. The GPCP is implementing emerging technology to provide students with multimedia communication material to enhance their technical skills. The newly expanded GPCP consists of three components: courses, coaching, and on-line material. Additional information about the GPCP courses for international students is available at <a href="http://users.ece.gatech.edu/~gpalmer/index.shtml">http://users.ece.gatech.edu/~gpalmer/index.shtml</a>
		Computer	213	
		iBT	80	
Stanford	EE	Paper	600	The English for Foreign Students Office administers an English placement test at the beginning of each quarter. This test may be a required condition of admission for students whose native language is not English. The test assesses the ability to understand, speak, and write American English with particular emphasis on active speaking and writing. Results are evaluated in terms of the students' intended academic programs at Stanford and the University's requirements for that program. The results of the test determine whether students will be required to take courses in English in addition to their academic courses.
		Computer	250	
		iBT	100	
Illinois	ECE	Paper	590	If it is below 620 (260 for CBT, 105 for iBT), an English as Second Language Placement exam must be taken on the campus and the courses required by its results must be taken.
		Computer	242	
		iBT	96	
Cornell	ECE	Paper	600	
		Computer	250	
		iBT	100	15 – Listening, 20 - Writing, 20 - Reading, 22 - Speaking

FRESHMEN	Applicants			Increase	Admits		
	3/20/2009	BS + (BS+MS)	3/21/2008		3/20/2009	3/21/2008	Increase
<b>MAJOR</b>							
Bioengineering	345		284	21%	305	239	28%
Business_Informatics	40		35	14%	23	24	-4%
Chemical_Engineering	175		218	-20%	204	175	17%
Chemical_Engineering_BS+MS	100	275		26%	15		
Computer_Engineering	483		520	-7%	367	219	68%
Computer_Science	304		445	-32%	377	326	16%
Computer_Science_BS+MS	247	551		24%	39		
Electrical_Engineering	356		304	17%	286	219	31%
Environmental_Engineering	156		129	21%	211	106	99%
Environmental_Engineering_BS+MS	114	270		109%	16		
Materials_Science_and_Engineering	34		59	-42%	28	40	-30%
Mechanical_Engineering	518		650	-20%	665	529	26%
Mechanical_Engineering_BS+MS	344	862		33%	31		
<b>TOTALS</b>							
BS + (BS+MS)	3216		2644	22%	2567	1877	37%
BS+MS Only	805				101		