Chairs' & Center Directors' Meeting Minutes

Date: June 30, 2008 (12:00 to 2:00 pm)
Location: EBU II – Room 443
Attendees: Abbaschian, Reza
Bhanu, Bir
Bhuyan, Laxmi
Boretz, Mitch
Hartney, Pat
Lake, Roger
Mahalingam, Shankar
Parker, Linda
Schultz, Jerry

Absent: Balandin, Alex
Barth, Matt
Deshusses, Marc
Haddon, Robert
Matsumoto, Mark
Norbeck, Joe
Ravishankar, Chinya

The agenda for the meeting is shown in Appendix 1.

1. Welcome – Request for Agenda Items from the Floor – Reza
Reza welcomed Shankar to the meeting. He is the new Chair of Mechanical Engineering starting 7/1/08 and is attending this meeting for Qing. Also, Reza mentioned that Yushan Yan will be the new Chair of Chemical/Environmental Engineering.
Reza added the topics of PhD Reward Program and Faculty Workload distribution to the agenda.

2. Minutes Approval - Pat
The minutes of the 6/16/08 Chairs/Directors meeting were unanimously approved.

3. Bioengineering Symposium – Jerry
Jerry explained that there are 10 UC Bioengineering departments participating in UC's Bioengineering Institute of California MRU. The original funding for the MRU was directed to the sharing of educational programs, joint seminars and an annual symposium (which circulates around the 10 campuses). The only MRU program still being carried out is the annual Symposium. This Symposium was recently hosted by UCR's Bioengineering department and was very successful. There were 200 attendees, including 130-140 grad students. There were 40 participants from UCR. The Symposium was scheduled from Friday night through Sunday afternoon. One of the goals of this Symposium was to highlight UCR and BCoE. Jerry, Victor Rodgers and Denise Sanders organized it similar to a national meeting. The Symposium received support from various industrial sponsors, $10K from the MRU, $25K from the Army and $15K from UC Discovery. Industrial sponsors included Genentech. A total of $5,000 was awarded to grad student presenters. The Symposium was linked to the Southern California Biomedical Council's website. The Symposium was held in the new Commons building since this facility had appropriate meeting and

event rooms. Publicity for the Symposium was generated via postcards, posters and website updates. The Symposium had several national speakers. The Symposium's reception was held at the Mission Inn and included optional Tours of the Inn.

4. Graduate Education – Reza

Mark was unavailable since he was giving a BCoE tour to representatives of the Achievement Rewards for College Scientists (ARCS) who may provide scholarship funds to BCoE grad students. Reza reported that there are 164 BCoE grad student SIR's to date which is 44 over target. These 44 represent the entire increase in grad student SIR's at UCR. There will be a reallocation of Grad Division fellowship funding among academic units after the final number of SIR's is determined. Reza announced that Joseph Childers will be named the new Dean of the Graduate Division. BCoE had more grad student applications than CHASS this year. Our goal is to increase the number of grad student applications so that we can be more selective (which helps in US News and World Report rankings).
Pat mentioned that EE's Graduate Program Assistant is being hired by CSE. This transfer is mostly due to the fact that CSE's position is at a higher (non-union) SAO I classification than EE's AAIII position. BCoE requested the reclassification of EE's and CEE's (AAIII) Graduate Assistants last year. In response to this request, HR established a campus committee to review these positions in all academic units and make classification recommendations. This committee recently submitted its recommendations to HR and Pat believes that HR will be releasing these recommendations very soon. These recommendations present a framework for reclassification requests and should enable BCoE's requests to be approved by HR. However, UC's Clerical Union (CUE) has to approve each reclass request that results in a position leaving the union so it may take awhile for these reclasses to be implemented. HR is hoping that the campus-level committee review and formal process will enhance the possibility that CUE will not object to these reclasses.

5. Undergraduate Education Resource Needs - Reza

Reza stated that there are over 570 BCoE Freshmen acceptances to date and that campus expects to enroll over 700 more Freshmen this Fall than last year. The campus has asked academic units to submit requests for any (temporary) additional resources needed to service these additional Freshmen. There is approximately $3M available due to the additional Ed Fees generated by these additional students. Each BCoE department was asked to evaluate its needs. Pat will send updated enrollment projections tomorrow and asked for each department's input by Wednesday. The short time period is due to APB's timetable.

6. Faculty Hires – Reza

Reza stated that 6 faculty candidates have accepted BCoE offers so far and that two are still pending. As such, there will be three faculty lines not filled during this year's search. The EVCP has approved the continued searches for these three lines next year in addition to one due to Marc Deshusses' separation and one to initiate a Civil Engineering program. The Civil Engineering line is expected to be an advance from next year's new FTE allocation. Reza stated that he wants to wait for the EVCP's approval letter before asking departments to prepare search plans. Reza indicated that not all departments will be searching for faculty next year since there are only three lines available, not including the ones for Marc's replacement and for Civil Engineering. As such, he encouraged departments to develop interdisciplinary programs or new centers that would benefit by the addition of new faculty. He expects that BCoE search plans will need to be developed between mid-July and mid-August. Reza suggested that EE consider the establishment of a Systems Engineering program. Jerry mentioned that the campus has 11 positions dedicated to HSRI and that some of these could be joint positions with BCoE departments.

7. Space – Reza
Reza has asked Tim Willette to review all BCoE spaces and reclaim any unused spaces and desks. The MSO's have been asked to provide names for each room and desk. Any unclaimed spaces and desks will be needed for incoming faculty and grad students. Reza expects to assign spaces for new faculty hires by the end of this week.

8. Project Lead the Way – Mitch
Mitch explained that Project Lead the Way is a national non-profit organization that provides curriculum to high school students to help them get accepted to university engineering programs. Project Lead the Way (PLTW) requires high schools to have access to CAD machines and other equipment. Mark Matsumoto advises PLTW programs in Riverside, and local Riverside high school students have access to this equipment at BCoE. San Diego State University provides the only Project Lead the Way teacher training program in California. Cal Poly Pomona will become the second California site for Project Lead the Way beginning in 2009. Project Lead the Way is developing curriculum in Power and Energy engineering, and Mitch suggested to them that CE-CERT would be a natural location for this program's teacher training, possibly as a satellite site to the Cal Poly Pomona site. Teachers pay for taking these classes so there is little cost to the institution. Also, Project Lead the Way is expanding its Biomedical Science curriculum program and will be searching for a teacher training site in the West, preferably in California. Mitch proposed that BCoE request to be this site which would enhance its visibility with local high schools. The Riverside County Utility is interested in providing funding to support such a site. The regional director of state and corporate relations for Project Lead the Way, Judy D'Amico, travels to Southern California frequently and has promised to schedule a visit to UCR to discuss these opportunities soon.

9. Future meeting dates/dietary restrictions – Pat
Pat pointed out the list of draft Chair/Director meeting dates attached to the agenda and asked participants to indicate if they had any significant conflicts with these dates. Also, he asked participants to send Eilene any dietary restrictions so that she could include these restrictions in future lunch orders.

10. Other Topics
PhD Reward: Reza asked the Chairs to nominate department faculty to a committee that would make recommendations on how best to revise the current PhD Reward program. Shankar nominated Guillermo; Laxmi nominated Walid; Jerry nominated Dimitrios; Roger will send Reza a name later. Mark will Chair this Committee. Reza will also ask the Committee to make recommendations on the number of grad students in 297 and 299 that would qualify a faculty member for teaching course relief. Reza hopes that the Committee will meet one to two times this summer and make its recommendations before Fall quarter.

Reza distributed an Instructional Workload Policy from UCB's College of Engineering. Mark used this Policy to calculate instructional workload for BCoE department faculty. These calculations (without faculty names) were attached to the UCB Policy document. According to these UCB Policy calculations, many BCoE faculty are below expected instructional workloads (for the FY 07/08 sample year). Reza also distributed a Draft BCoE Instructional Workload Policy modeled after UCB's Policy but including a credit for Graduate Education. This model's calculations indicated again that many BCoE faculty are below expected instructional workloads (for the FY 07/08 sample year). Mark will provide faculty names for a department's model upon request from the Chair. Reza explained that this data should not be used rigorously to assign course loads to faculty but could be used as input when distributing course loads.

UNIVERSITY OF CALIFORNIA
UC RIVERSIDE
BOURNS COLLEGE OF ENGINEERING

Chairs' & Center Directors' Meeting

June 30, 2008

Agenda

Engineering Building Unit II – Room 443

1.	Welcome - Request for Agenda Items from the Floor	Reza
2.	Approval of Minutes from June 16, 2008 Meeting	Pat
3.	Bioengineering Symposium	Jerry
4.	Graduate Education	Mark
	• Graduate Student Affairs Functions	
5.	Undergraduate Education Resource Needs	Reza
6.	Faculty Hires	Reza
7.	Space	Reza
8.	Project Lead the Way	Mitch
9.	Future meeting dates/dietary restrictions	Pat
10.	Other Topics	

The next scheduled meeting will be
Monday, July 14, 2008

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

UNIVERSITY OF CALIFORNIA
UC RIVERSIDE
BOURNS COLLEGE OF ENGINEERING

Chairs' & Center Directors' Meeting Dates 2008-09

(Currently all set for Mondays)
Noon – 2 p.m. (unless otherwise notified)
Location: EBU II 443

2008

July 14
August 18
September 8
September 22
October 6
October 20
November 3
November 17
December 1
December 15

2009

January 12
January 26
February 9
February 23
March 9
March 23
April 6
April 20
May 4
May 18
June 1
June 15
June 29

UC BERKELEY COLLEGE OF ENGINEERING
INSTRUCTIONAL WORKLOAD POLICY

All ladder-rank faculty members in the College are expected to teach both formal (lecture) undergraduate and graduate courses, as well as seminar courses in support of graduate student training.

1. The normal annual Expected Teaching Workload (ETW) for a full-time ladder rank faculty member with no reduction in expectations due to leave, sabbaticals, or administrative assignments, shall be 12.0 Teaching Credits (8.0 semester basis).
2. Approved leaves and sabbaticals shall reduce a faculty member's ETW in direct proportion to the percentage of the leave.
3. The Department and Program Chairs may recommend ETW reductions for administrative assignments and other purposes. All such reductions must be approved in writing by the Dean.
4. Workload reductions for new faculty member may also be recommended by a Department Chair for approval by the Dean.

Course Teaching Credit

The determination of Annual Teaching Credit (ATC) for regularly-scheduled, non-seminar courses will be calculated using the following formula:

$$ATC = MIN\big((LH + LC) * WF, 12\big)$$

1. The upper limit for any single course, no matter how large and how many other factors are involved is 12.0 Teaching Credits.
2. The number of Lecture Hours (LH) credited for a course is the number of hours each week of regularly scheduled lectures (e.g., LH – 3 for a MWF 9-10 class). Courses without assigned lectures such as lab courses are assigned LH = 0.75.
3. For a course with a lab, Lab Credit (LC) = 0.35 in the teaching credit formula (for the first section only of a multi-section course), otherwise LC = 0.
4. The Weighting Factor (WF) for a course is determined by its total enrollment (N), as shown on the Registrar's grade list, and the formulae below. Small graduate courses are treated differently than small undergraduate courses.
    a. The WF for an undergraduate course is determined by the following.

        If $N \leq 5$, WF = 0.0

        If $5 < N \leq 10$, WF = 0.1*N

        If $10 < N \leq 30$, WF = 1.0

        If $30 < N$, WF = 1 + 0.005*(N-30)

    b. The WF for a graduate course is determined by the following piece-wise linear curve.

        If $0 < N \leq 5$, WF = 0.2*N

        If $5 < N \leq 30$, WF = 1.0

        If $30 < N$, WF = 1 + 0.005*(N-30)
5. For a faculty member teaching multiple sections of a course in a given quarter, the initial ATC shall computed as if all enrolled students were in a single section. The ATC for additional sections shall be computed as 0.6*LH for each section. The total CTC shall be the sum of the initial credit and the credits for the additional sections, subject to the maximum ATC of 12.0 for a single course.

6. If a course is team-taught, the ATC for the course shall be divided among the instructors in proportion to their declared percentage workload for the course. Otherwise, workload credit will be divided equally among the faculty members. Additional ATC for all instructors involved may be approved by a Department Chair.
7. A Department Chair may grant additional ATC for the development of an entirely new course that serves the department overall – not simply a graduate course or undergraduate technical elective in a faculty member-specialty.
8. A Department Chair may approved for a faculty member who performs an instructional activity, such as ABET accreditation activities, deemed worthy of exceptional treatment.
9. Any additional ATC shall be documented in writing so that it may be included in the faculty member's merit/promotion dossier.

Net Teaching Credit

The Net Teaching Credit (NTC) for a given year or interval will be calculated as:

$$NTC_Y = ATC - ETW$$

NTC balances will be tracked by all departmental office and reported to the Dean's Office annually. The College will maintain a record for all faculty members in the College, as reported by the departments.

Ladder-rank faculty members are expected to keep their personal NTC balance zero or positive. Faculty members will a significant positive balance will be considered favorably for additional teaching relief, while faculty members with a significant teaching balance will be asked to correct their deficit by teaching above the "normal" load and may not be approved for a sabbatical or other leave until they have corrected their teaching record.

BIOENGINEERING

Faculty	ATC	ETW	NTC
	6.00	12.00	-6.00
	9.40	12.00	-2.60
	4.05	6.00	-1.95
	3.00	4.00	-1.00
	12.91	12.00	0.91
	9.00	8.00	1.00
	13.50	8.00	5.50
	57.86	62.00	-4.15

CHEMICAL & ENVIRONMENTAL ENGINEERING

Faculty	ATC	ETW	NTC
	5.10	12.00	-6.90
	6.56	12.00	-5.44
	3.75	8.00	-4.25
	9.08	12.00	-2.93
	5.44	8.00	-2.56
	0.00	2.00	-2.00
	5.50	6.00	-0.50
	3.75	4.00	-0.25
	7.85	8.00	-0.15
	6.00	6.00	0.00
	0.00	0.00	0.00
	0.00	0.00	0.00
	5.70	4.00	1.70
	58.72	82.00	-23.28

COMPUTER SCIENCE & ENGINEERING

Faculty	ATC	ETW	NTC
	5.00	12.00	-7.00
	5.40	12.00	-6.60
	6.03	12.00	-5.97
	6.87	12.00	-5.13
	7.55	12.00	-4.45
	3.00	6.00	-3.00
	9.22	12.00	-2.78
	9.25	12.00	-2.75
	9.55	12.00	-2.45
	10.18	12.00	-1.82
	10.26	12.00	-1.74
	10.35	12.00	-1.65
	10.35	12.00	-1.65
	11.03	12.00	-0.98
	3.35	4.00	-0.65
	12.35	12.00	0.35
	6.35	6.00	0.35
	8.49	8.00	0.49
	9.10	8.00	1.10
	9.87	8.00	1.87
	10.81	8.00	2.81
	10.82	8.00	2.82
	185.18	224.00	-38.82

ELECTRICAL ENGINEERING

Faculty	ATC	ETW	NTC
	6.48	12.00	-5.52
	6.70	12.00	-5.30
	3.00	6.00	-3.00
	9.48	12.00	-2.52
	9.77	12.00	-2.23
	5.82	8.00	-2.18
	9.83	12.00	-2.17
	6.00	8.00	-2.00
	6.35	8.00	-1.65
	6.70	8.00	-1.30
	0.00	1.20	-1.20
	7.02	8.00	-0.98
	11.15	12.00	-0.85
	11.78	12.00	-0.22
	6.00	6.00	0.00
	6.62	6.00	0.62
	12.65	12.00	0.65
	9.00	8.00	1.00
	13.05	12.00	1.05
	13.20	12.00	1.20
	9.81	8.00	1.81
	14.10	12.00	2.10
Dept	184.50	207.20	-22.70

MECHANICAL ENGINEERING

Faculty	ATC	ETW	NTC
	9.05	12.00	-2.95
	6.41	8.00	-1.60
	6.43	8.00	-1.57
	10.76	12.00	-1.24
	10.86	12.00	-1.14
	7.51	8.00	-0.49
	0.00	0.00	0.00
	12.30	12.00	0.30
	9.06	8.00	1.06
	7.70	6.00	1.70
	9.83	8.00	1.83
	10.39	8.00	2.39
	10.61	8.00	2.61
	10.92	8.00	2.92
	11.22	8.00	3.22
	133.04	126.00	7.04

DRAFT

BOURNS COLLEGE OF ENGINEERING
INSTRUCTIONAL WORKLOAD POLICY[1]

The Bourns College of Engineering instructional workload policy provides a semi-quantitative mechanism for evaluating the instructional workload of ladder-rank faculty members. The purpose of this policy is to provide a basis for fairness and accountability in teaching.

All ladder-rank faculty members in the College are expected to teach both formal (lecture) undergraduate and graduate courses, as well as seminar courses in support of graduate student training.

1. The normal annual Expected Teaching Workload (ETW) for a full-time ladder rank faculty member with no reduction in expectations due to leave, sabbaticals, or administrative assignments, shall be 16.0 Teaching Credits.
2. Approved leaves and sabbaticals shall reduce a faculty member's ETW in direct proportion to the percentage of the leave.
3. The Department and Program Chairs may recommend ETW reductions for administrative assignments and other purposes. All such reductions must be approved in writing by the Dean.
4. Workload reductions for new faculty member may also be recommended by a Department Chair for approval by the Dean.

Course Teaching Credit

The determination of Course Teaching Credit (CTC) for regularly-scheduled, non-seminar courses will be calculated using the following formula:

$$CTC = MIN\big((LH + LC + DC) * WF, 16\big)$$

1. The upper limit for any single course, no matter how large and how many other factors are involved is 16.0 Course Teaching Credits.
2. The number of Lecture Hours (LH) credited for a course is the number of hours each week of regularly scheduled lectures (e.g., LH – 3 for a MWF 9-10 class). Courses without assigned lectures such as lab courses are assigned LH = 0.75.
3. For a course with a lab, Lab Credit (LC) = 0.35 in the ATC formula (for the first section only of a multi-section course), otherwise LC = 0.
4. For a course with a discussion, Discussion Credit (DC) = 0.25 in the ATC formula (for the first section only of a multi-section course), otherwise DC = 0.
5. The Weighting Factor (WF) for a course is determined by its total enrollment (N), as shown on the Registrar's grade list, and the formulae below. Small graduate courses are treated differently than small undergraduate courses.
    a. The WF for an undergraduate course is determined by the following.

        If $N \leq 5$, WF = 0.0

        If $5 < N \leq 10$, WF = 0.1*N

        If $10 < N \leq 30$, WF = 1.0

        If $30 < N$, WF = 1 + 0.005*(N-30)

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[1] This policy is adapted with modification from the UC Berkeley College of Engineering workload policy model.

b. The WF for a graduate course is determined by the following piece-wise linear curve.

If $0 < N \leq 5$, WF = 0.2*N

If $5 < N \leq 30$, WF = 1.0

If $30 < N$, WF = 1 + 0.005*(N-30)

6. For a faculty member teaching multiple sections of a course in a given quarter, the initial CTC shall computed as if all enrolled students were in a single section. The CTC for additional sections shall be computed as 0.6*LH for each section. The total CTC shall be the sum of the initial credit and the credits for the additional sections, subject to the maximum CTC of 8.0 for a single course.
7. If a course is team-taught, the CTC for the course shall be divided among the instructors in proportion to their declared percentage workload for the course. Otherwise, workload credit will be divided equally among the faculty members. Additional CTC for all instructors involved may be approved by a Department Chair.
8. A Department Chair may grant additional CTC for the development of an entirely new course that serves the department overall – not simply a graduate course or undergraduate technical elective in a faculty member-specialty.
9. A Department Chair may approved for a faculty member who performs an instructional activity, such as ABET accreditation activities, deemed worthy of exceptional treatment.
10. Any additional CTC shall be documented in writing so that it may be included in the faculty member's merit/promotion dossier.

Graduate Education Credit

The determination of Graduate Education Credit (GEC) will be calculated on the basis of total enrollment units (TU) in seminar courses or research courses such as X-297 and X-299 over the academic year (or other designated 3-qtr interval) as shown in the Registrar's grade list. The formula for GEC calculation is:

$$GEC = \frac{(TU)}{180}$$

The TU is calculated by summing the number of credits taken by students enrolled in seminar courses such as X-297 and X-299 under a faculty member.

Annual Workload Credit and Net Teaching Credit

The Annual Workload Credit (AWC) will be the sum of the Course Teaching Credit (CTC) and the Graduate Education Credit (GEC).

$$AWC = CTC + GEC$$

The Net Teaching Credit (NTC) for a given year or interval will be calculated as:

$$NTC_Y = AWC - ETW$$

NTC balances will be tracked by all departmental office and reported to the Dean's Office annually. The College will maintain a record for all faculty members in the College, as reported by the departments.

Ladder-rank faculty members are expected to keep their personal NTC balance zero or positive. Faculty members will a significant positive balance will be considered favorably for additional teaching relief, while faculty members with a significant teaching balance will be asked to correct their deficit by teaching above the "normal" load and may not be approved for a sabbatical or other leave until they have corrected their teaching record.

BIOENGINEERING

Faculty	CTC	GEC	AWC	ETW	NTC
	7.25	0.00	7.25	16.00	-8.75
	3.00	0.09	3.09	8.00	-4.91
	13.55	0.09	13.64	16.00	-2.36
	6.00	0.00	6.00	8.00	-2.00
	10.70	0.00	10.70	12.00	-1.30
	16.05	0.00	16.05	12.00	4.05
	16.84	4.73	21.58	16.00	5.58
	73.39	4.91	78.30	88.00	-9.70

CHEMICAL & ENVIRONMENTAL ENGINEERING

Faculty	CTC	GEC	AWC	ETW	NTC
	5.53	2.71	8.24	16.00	-7.76
	7.57	3.36	10.92	16.00	-5.08
	0.00	0.49	0.49	4.00	-3.51
	5.25	0.73	5.98	8.00	-2.02
	5.25	5.56	10.81	12.00	-1.19
	8.25	2.69	10.93	12.00	-1.07
	6.93	0.47	7.39	8.00	-0.61
	6.00	1.40	7.40	8.00	-0.60
	6.50	1.51	8.01	8.00	0.01
	6.35	5.67	12.02	12.00	0.02
	9.83	6.20	16.03	16.00	0.03
	0.00	0.67	0.67	0.00	0.67
	0.00	1.42	1.42	0.00	1.42
	67.44	32.87	100.31	120.00	-19.69

COMPUTER SCIENCE & ENGINEERING

Faculty	CTC	GEC	AWC	ETW	NTC
	6.03	0.80	6.83	16.00	-9.17
	5.25	2.02	7.27	16.00	-8.73
	5.85	1.73	7.58	16.00	-8.42
	5.92	2.93	8.85	16.00	-7.15
	9.80	0.00	9.80	16.00	-6.20
	10.18	0.00	10.18	16.00	-5.82
	9.22	1.24	10.46	16.00	-5.54
	7.83	3.24	11.07	16.00	-4.93
	10.60	0.73	11.33	16.00	-4.67
	10.60	0.78	11.38	16.00	-4.62
	9.55	3.24	12.79	16.00	-3.21
	11.53	1.36	12.89	16.00	-3.11
	3.25	1.89	5.14	8.00	-2.86
	9.10	0.60	9.70	12.00	-2.30
	10.77	3.24	14.01	16.00	-1.99
	3.35	0.00	3.35	5.00	-1.65
	12.60	2.27	14.87	16.00	-1.13
	6.60	0.93	7.53	8.00	-0.47
	8.79	2.96	11.74	12.00	-0.26
	11.08	0.80	11.88	12.00	-0.12
	11.43	2.47	13.89	12.00	1.89
	10.12	5.13	15.25	12.00	3.25
	189.44	38.38	227.82	305.00	-77.18

ELECTRICAL ENGINEERING

Faculty	CTC	GEC	AWC	ETW	NTC
	6.48	0.27	6.75	16.00	-9.25
	6.70	1.27	7.97	16.00	-8.03
	6.70	0.53	7.23	12.00	-4.77
	6.02	1.47	7.48	12.00	-4.52
	11.80	0.00	11.80	16.00	-4.20
	7.27	1.58	8.85	12.00	-3.15
	6.50	2.38	8.88	12.00	-3.12
	9.83	3.24	13.07	16.00	-2.93
	9.73	3.71	13.44	16.00	-2.56
	13.30	0.27	13.57	16.00	-2.43
	6.60	3.36	9.96	12.00	-2.04
	12.48	1.53	14.02	16.00	-1.98
	13.40	0.62	14.02	16.00	-1.98
	0.00	0.00	0.00	1.60	-1.60
	10.02	0.89	10.91	12.00	-1.09
	9.75	1.27	11.02	12.00	-0.98
	3.25	3.82	7.07	8.00	-0.93
	5.98	1.42	7.40	8.00	-0.60
	13.45	2.84	16.29	16.00	0.29
	14.35	3.33	17.68	16.00	1.68
	10.06	5.00	15.06	12.00	3.06
	6.87	4.38	11.25	8.00	3.25
	190.54	43.18	233.72	281.60	-47.88

MECHANICAL ENGINEERING

Faculty	CTC	GEC	AWC	ETW	NTC
	6.94	0.71	7.65	12.00	-4.35
	11.07	2.11	13.18	16.00	-2.82
	10.38	0.40	10.78	12.00	-1.22
	8.76	2.04	10.80	12.00	-1.20
	11.15	3.71	14.86	16.00	-1.14
	9.62	1.38	10.99	12.00	-1.01
	9.61	1.49	11.10	12.00	-0.90
	12.73	2.47	15.19	16.00	-0.81
	10.92	1.24	12.17	12.00	0.17
	7.95	0.22	8.17	8.00	0.17
	10.92	1.27	12.18	12.00	0.18
	11.00	1.56	12.55	12.00	0.55
	0.00	0.73	0.73	0.00	0.73
	7.80	1.47	9.27	8.00	1.27
	11.22	3.33	14.55	12.00	2.55
	140.05	24.13	164.19	172.00	-7.81