

Office of the President
October 11, 1995

TO MEMBERS OF THE COMMITTEE ON EDUCATIONAL POLICY:

ITEM FOR INFORMATION

For Meeting of October 19, 1995

REPORT ON NATIONAL RESEARCH COUNCIL STUDY

On September 12, 1995, the National Research Council issued its report on a comprehensive study designed to examine the quality of Ph.D. programs in the United States. To this end, data were collected on doctoral programs in 41 fields of study in 5 broad disciplinary areas at 274 institutions. Numerous indicators of program quality were developed from information such as faculty publications, research grants, awards and honors, and reputational ratings.

A key indicator of the quality of a doctoral program is the quality of the program's faculty. A measure of faculty quality developed in the study was based on a survey of about 8,000 faculty members. Survey respondents were asked to rate faculty quality of individual doctoral programs on a scale of 1 to 5. These ratings were combined to construct an average reputational rating for each program. For each field, the resulting average ratings were used to rank the programs with respect to faculty quality.

- Table 1 lists the University of California programs that were ranked in the top 20 in their field. More than half of the University's 229 programs included in the study rank in the top 20 in the nation.
- Table 2 provides a summary by campus of the number of programs that were ranked in the top 10, the top 20, and the top one-quarter of their field. It is worth noting that the University of California's campuses had 20 percent of the nation's top 5 programs, 19 percent of the top 10 programs, and 15 percent of the top 20 programs.

The NRC study does not provide a ranking of institutions in terms of faculty quality. However, the study's data can be combined to obtain a measure of its overall faculty quality. This can be done in several ways.

- Table 3 shows the ranking of universities according to the number of programs each has that rank in the top 10 in their field, with three

University of California campuses (Berkeley, San Diego, and Los Angeles) ranking among the top 20 universities.

- Table 4 shows the ranking of universities according to the number of their programs in the top 20. Here again, three of the University's campuses rank highly, though in a different order (Berkeley, Los Angeles, and San Diego).

Table 1

UNIVERSITY OF CALIFORNIA PROGRAMS RANKED IN THE TOP 20 IN FACULTY QUALITY*
(Total: 119 UC Programs in Top 20, Out Of 229 Programs Rated)

Rank 1-5			Rank 6-10			Rank 11-15			Rank 16-20		
BIOCHEM & MOLE BIOL	1	SF	ASTROPHYS & ASTRON	6	SC	ECONOMICS	11	LA	ASTROPHYS & ASTRON	16	LA
CHEMISTRY	1	B	GENETICS	6	SD				CIVIL ENG	16	D
ENGLISH LANG & LIT	1	B	GEOGRAPHY	6	B	ENGLISH LANG & LIT	12	LA	COMPARATIVE LIT	16	LA
GERMAN LANG & LIT	1	B	GEOSCIENCES	6	SD	GEOSCIENCES	12	LA	ECONOMICS	16	SD
MATHEMATICS	1	B	HISTORY	6	LA	MATHEMATICS	12	LA	PHYSICS	16	SD
NEUROSCIENCES	1	SD	LINGUISTICS	6	B	STATISTICS	12	LA	SPAN/PORT LANG & LIT	16	LA
OCEANOGRAPHY	1	SD	PHILOSOPHY	6	LA						
STATISTICS	1	B				ART HISTORY	13	LA	CELL & DEVEL BIOL	17	LA
			BIOMEDICAL ENG	7	SF	CELL & DEVEL BIOL	13	B	MATHEMATICS	17	SD
BIOMEDICAL ENG	2	SD	CELL & DEVEL BIOL	7	SD						
CIVIL ENG	2	B	ECONOMICS	7	B	BIOCHEM & MOLE BIOL	14	LA	CHEMISTRY	18	SD
CLASSICS	2	B	FRENCH LANG & LIT	7	B	CHEMICAL ENG	14	SB	COMPARATIVE LIT	18	SD
GENETICS	2	SF				COMPUTER SCIENCES	14	LA	ECOLOGY, EVOL & BEH	18	SD
HISTORY	2	B	BIOMEDICAL ENG	8	B	GERMAN LANG & LIT	14	I	ECOLOGY, EVOL & BEH	18	LA
INDUSTRIAL ENG	2	B	COMPARATIVE LIT	8	I	LINGUISTICS	14	SD	FRENCH LANG & LIT	18	LA
PHYSIOLOGY	2	SD	ECOLOGY, EVOL & BEH	8	B	MECHANICAL ENG	14	LA	MUSIC	18	LA
POLI SCI	2	B	GEOGRAPHY	8	LA	SPAN/PORT LANG & LIT	14	D	SPAN/PORT LANG & LIT	18	SD
			MATERIALS SCIENCE		SB						
ANTHROPOLOGY	3	B	POLI SCI	8	LA	ANTHROPOLOGY	15	D	ELECTRICAL ENG	19	SB
ART HISTORY	3	B				ENGLISH LANG & LIT	15	I			
ASTROPHYS & ASTRON	3	B	ANTHROPOLOGY	9	LA	NEUROSCIENCES	15	LA	ANTHROPOLOGY	20	SB
CELL & DEVEL BIOL	3	SF	ANTHROPOLOGY	9	SD	PHILOSOPHY	15	SD	ECOLOGY, EVOL & BEH	20	SB
CHEMICAL ENG	3	B	BIOCHEM & MOLE BIOL	9	SD	PHYSICS	15	LA	ELECTRICAL ENG	20	SD
COMPUTER	3	B	CLASSICS	9	LA	SPAN/PORT LANG	15	I	GEOSCIENCES	20	SB

SCIENCES						& LIT					
GEOSCIENCES	3	B	NEUROSCIENCES	9	B				SPAN/PORT LANG & LIT	20	SB
LINGUISTICS	3	LA	POLI SCI	9	SD						
MECHANICAL ENG	3	B	PSYCHOLOGY	9	B						
MUSIC	3	B	RELIGION	9	SB						
PHARMACOLOGY	3	SD	SPAN/PORT LANG & LIT	9	B						
PHYSICS	3	B									
SOCIOLOGY	3	B	AEROSPACE ENG	10	SD						
STATISTICS (BIOSTATISTICS)	3	B	AEROSPACE ENG	10	LA						
			CHEMISTRY	10	LA						
BIOCHEM & MOL BIOL	4	B	COMPARATIVE LIT	10	B						
ELECTRICAL ENG	4	B	ELECTRICAL ENG	10	LA						
GEOGRAPHY	4	SB	FRENCH LANG & LIT	10	I						
MATERIALS SCIENCE	4	B	GENETICS	10	B						
NEUROSCIENCES	4	SF	LINGUISTICS	10	SC						
PHILOSOPHY	4	B	MECHANICAL ENG	10	SD						
PHYSIOLOGY	4	LA	PHYSICS	10	SB						
PSYCHOLOGY	4	LA	PSYCHOLOGY	10	SD						
ECOLOGY, EVOL & BEH	5	D									
PHYSIOLOGY	5	SF									
SOCIOLOGY	5	LA									
Number of Programs	41			37				*20		21	

* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995.

Table 2
FACULTY QUALITY
OF UNIVERSITY OF CALIFORNIA CAMPUSES
BY THREE MEASURES*

Campus	Total Number of Programs Rated	Number of Programs in Top 10	Number of Programs in Top 20	Number of Programs in Top One-Quarter**
Berkeley	37	36	37	37
Davis	26	1	4	7
Irvine	24	2	5	9

Los Angeles	36	13	31	24
Riverside	19			1
San Diego	29	14	24	23
San Francisco	9	6	6	7
Santa Barbara	32	4	10	10
Santa Cruz	<u>17</u>	<u>2</u>	<u>2</u>	<u>3</u>
TOTAL	229	78	119	121

* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995

** The number of programs in the top one-quarter varies from field to field because the total number of rated programs varies significantly by field. For example, 42 programs were in the top one-quarter of chemistry because a total of 168 chemistry programs were rated, whereas only 10 programs were in the top one-quarter of linguistics because only 41 linguistics programs were rated.

Table 3

**TOP 20 UNIVERSITIES
AND UNIVERSITY OF CALIFORNIA CAMPUSES
IN FACULTY QUALITY
BY NUMBER OF PROGRAMS IN TOP 10***

Rank	University	Number of Programs in Top 10	Total Programs	Percent in Top 10
1	UNIVERSITY OF CALIFORNIA-BERKELEY	36	37	97%
2	Stanford University	32	43	74%
3	Harvard University	26	30	87%
4	Princeton University	22	29	76%
5	Massachusetts Inst. of Technology	20	23	87%
6	Yale University	19	30	63%
6	Cornell University	19	37	51%
8	University of Chicago	18	30	60%
9	University of Pennsylvania	15	36	42%
10	UNIVERSITY OF CALIFORNIA-SAN DIEGO	14	29	48%
10	Columbia University	14	34	41%
10	University of Wisconsin-Madison	14	39	36%

10	University of Michigan	14	41	34%
14	California Institute of Technology	13	19	68%
14	UNIVERSITY OF CALIFORNIA-LOS ANGELES	13	36	36%
16	University of Washington	11	39	28%
17	U of Illinois at Urbana-Champaign	10	37	27%
18	Johns Hopkins University	9	34	26%
19	Duke University	8	33	24%
20	University of Texas at Austin	7	37	19%

21	UNIVERSITY OF CALIFORNIA-SAN FRANCISCO	6	9	67%
26	UNIVERSITY OF CALIFORNIA-SANTA BARBARA	4	32	13%
29	UNIVERSITY OF CALIFORNIA-IRVINE	2	24	8%
29	UNIVERSITY OF CALIFORNIA-SANTA CRUZ	2	17	12%
41	UNIVERSITY OF CALIFORNIA-DAVIS	1	26	4%
	UNIVERSITY OF CALIFORNIA-RIVERSIDE	0	19	0%

* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995.

Table 4

**TOP 20 UNIVERSITIES
AND UNIVERSITY OF CALIFORNIA CAMPUSES
IN FACULTY QUALITY
BY NUMBER OF PROGRAMS IN TOP 20***

Rank	University	Number	Total Programs	Percent in Top 20
1	Stanford University	42	43	98%
2	UNIVERSITY OF CALIFORNIA-BERKELEY	37	37	100%
3	UNIVERSITY OF CALIFORNIA-LOS ANGELES	31	36	86%
4	University of Michigan	30	41	73%
5	Harvard University	28	30	93%

5	Princeton University	28	29	97%
5	University of Wisconsin-Madison	28	39	72%
8	Cornell University	27	37	73%
9	Columbia University	26	34	76%
9	Yale University	26	30	87%
11	University of Chicago	25	30	83%
11	University of Pennsylvania	25	36	69%
13	UNIVERSITY OF CALIFORNIA-SAN DIEGO	24	29	83%
13	University of Texas at Austin	24	37	65%
15	Massachusetts Inst. of Technology	23	23	100%
15	University of Washington	23	39	59%
17	U of Illinois at Urbana-Champaign	19	37	51%
18	California Institute of Technology	18	19	95%
18	Duke University	18	33	55%
20	U of North Carolina-Chapel Hill	16	34	47%

27	UNIVERSITY OF CALIFORNIA-SANTA BARBARA	10	32	31%
37	UNIVERSITY OF CALIFORNIA-SAN FRANCISCO	6	9	67%
40	UNIVERSITY OF CALIFORNIA-IRVINE	5	24	21%
45	UNIVERSITY OF CALIFORNIA-DAVIS	4	26	15%
59	UNIVERSITY OF CALIFORNIA-SANTA CRUZ	2	17	12%
	UNIVERSITY OF CALIFORNIA-RIVERSIDE	0	19	0%

* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995.

Table 5

**TOP 20 COMPREHENSIVE UNIVERSITIES
AND UNIVERSITY OF CALIFORNIA CAMPUSES
IN FACULTY QUALITY
BY AVERAGE RATING OF ALL FIELDS***

Rank	University	Average Rating	Number of Programs
1	Massachusetts Institute of Technology	4.60	23
2	UNIVERSITY OF CALIFORNIA-BERKELEY	4.49	37
3	Harvard University	4.40	30
4	California Institute of Technology	4.29	29
4	Princeton University	4.29	19
6	Stanford University	4.21	43
7	University of Chicago	4.13	30
8	Yale University	4.08	30
9	Cornell University	3.95	37
10	UNIVERSITY OF CALIFORNIA-SAN DIEGO	3.93	29
11	Columbia University	3.92	34
12	UNIVERSITY OF CALIFORNIA-LOS ANGELES	3.85	36
12	University of Michigan	3.85	41
14	University of Pennsylvania	3.79	36
15	University of Wisconsin -- Madison	3.70	39
16	University of Texas at Austin	3.63	37
17	University of Washington	3.60	39
18	Northwestern University	3.58	30
19	Carnegie Mellon University	3.56	15
19	Duke University	3.56	33
19	Johns Hopkins University	3.56	34
19	U of Illinois at Urbana-Champaign	3.56	37

27	UNIVERSITY OF CALIFORNIA-IRVINE	3.35	24
35	UNIVERSITY OF CALIFORNIA-DAVIS	3.18	26
41	UNIVERSITY OF CALIFORNIA-SANTA BARBARA	3.08	32
61	UNIVERSITY OF CALIFORNIA-RIVERSIDE	2.72	19

62	UNIVERSITY OF CALIFORNIA-SANTA CRUZ	2.71	17
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* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995.

NOTE: Comprehensive universities are defined as having 15 or more programs rated.

UC San Francisco has only 9 programs in the study but an average faculty quality rating comparable to the rating of the top 10 comprehensive universities.

Table 6

**TOP 20 COMPREHENSIVE PUBLIC UNIVERSITIES
AND UNIVERSITY OF CALIFORNIA CAMPUSES
IN FACULTY QUALITY
BY AVERAGE RATING OF ALL FIELDS***

Rank	University	Average Rating	Number of Programs
1	UNIVERSITY OF CALIFORNIA-BERKELEY	4.49	37
2	UNIVERSITY OF CALIFORNIA-SAN DIEGO	3.93	29
3	UNIVERSITY OF CALIFORNIA-LOS ANGELES	3.85	36
3	University of Michigan	3.85	41
5	University of Wisconsin-Madison	3.70	39
6	University of Texas at Austin	3.63	37
7	University of Washington	3.60	39
8	University of Illinois at Urbana-Champaign	3.56	37
9	University of Minnesota	3.45	39
10	U of North Carolina-Chapel Hill	3.44	34
11	UNIVERSITY OF CALIFORNIA-IRVINE	3.35	24

12	University of Virginia	3.34	32
13	Purdue University	3.31	25
14	University of Arizona	3.25	29
15	Rutgers State Univ-New Brunswick	3.23	33
16	Pennsylvania State University	3.18	39
16	UNIVERSITY OF CALIFORNIA-DAVIS	3.18	26
18	Ohio State University	3.16	39
19	Indiana University	3.15	28
20	State Univ. of New York-Stony Brook	3.13	30

21	UNIVERSITY OF CALIFORNIA-SANTA BARBARA	3.08	32
38	UNIVERSITY OF CALIFORNIA-RIVERSIDE	2.72	19
39	UNIVERSITY OF CALIFORNIA-SANTA CRUZ	2.71	17

* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995.

NOTE: Comprehensive universities are defined as having 15 or more programs rated.

UC San Francisco has only 9 programs in the study but an average faculty quality rating comparable to the rating of the top 10 comprehensive universities.

Table 7

**FACULTY QUALITY OF UNIVERSITY OF CALIFORNIA PROGRAMS:
RANKINGS OF AVERAGE RATINGS BY DISCIPLINE
FOR THOSE UNIVERSITIES WITH 3 OR MORE PROGRAMS RATED
IN EACH DISCIPLINE***

	Arts & Humanities	Biological Sciences	Engineering	Physical Sciences & Mathematics	Social & Behavioral Sciences
BERKELEY	1	7	2	1	3
DAVIS	41	27	24	54	37

IRVINE	13	44	38	40	26
LOS ANGELES	11	19	19	11	7
RIVERSIDE	42	80	---	68	62
SAN DIEGO	20	4	9	9	12
SAN FRANCISCO	---	1	---	---	---
SANTA BARBARA	30	110	16	34	32
SANTA CRUZ	---	126	---	42	---

Number of Universities Ranked	71	162	98	134	111
Number of Fields	11	7	8	8	7

* Based on results from National Research Council study, Research-Doctorate Programs in the United States: Continuity and Change, 1995.

** No programs were rated in this discipline

*** Fewer than 3 programs were rated in this discipline.