

# **2004 NSF/ADVANCE Change Indicators**

**LEAP**  
**Leadership Education for Advancement and Promotion**  
**University of Colorado, Boulder**

**by**

**Robyn Marschke, Ph.D.**

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**Table 1: Number and percentage of full-time tenure-track women faculty in science and engineering by department**

College of Engineering and the Natural Sciences cluster in the College of Arts & Sciences, 2004:

<b>Department</b>	<b>Women</b>	<b>Men</b>	<b>Percent Women</b>
Aerospace Engineering	3	25	11%
Applied Math	4	12	25%
Astrophysics and Planetary Sciences	1	14	7%
Atmospheric/Oceanic Sciences	1	7	13%
Chemical Engineering	2	14	13%
Chemistry	8	34	19%
Civil/Architectural Engineering	2	33	6%
Computer Science	4	29	12%
Ecology and Evolutionary Biology	7	23	23%
Electrical/Computer	5	37	12%
Engineering (Programs)	2	2	50%
Environmental Studies	1	4	20%
Geography	6	10	38%
Geological Sciences	4	17	19%
Herbst Engineering/Humanities Program	3	3	50%
Integrative Physiology	11	15	42%
Interdisciplinary Telecom	0	7	0%
Mathematics	7	23	23%
Mechanical Engineering	3	20	13%
Molecular, Cellular, and Developmental Biology	8	23	26%
Physics	2	40	5%
Psychology	16	31	34%
Residential Academic Programs	6	0	100%
<b>Totals</b>	<b>106</b>	<b>423</b>	<b>20%</b>

**Table 2: Number of full-time women in tenure-line positions by department, rank, and ethnicity**

College of Engineering and the Natural Sciences cluster in the College of Arts & Sciences, 2004:

Department	Full Professor						Assoc. Professor						Asst. Professor						Total Women
	A	B	H	W	Z	U	A	B	H	W	Z	U	A	B	H	W	Z	U	
Applied Math																2			2
Astro/Planetary Sci				1															1
Chemistry				4						1									5
Geological Sciences				1				1						1					3
Physics				2															2
Mathematics				1	1					2						1			5
Geography				1						2				1		2			6
Biology MCD				1						1				2		1			5
Biology EE				1						3						1			5
Integrative Physiology				2						1				1		1			5
Atmos/Oceanic Sci																	1		1
Psychology				6				1	1	1				2	1				12
Residential Academic Prgm					1														1
Aerospace										2									2
Chemical Engineering																1			1
Civil/Architectural Engineering				1						1									2
Engineering/Applied Sci														1					1
Computer Science										2									2
Electrical/Computer Engin.				1				1		1									3
Mechanical Engineering										2						1			3
<b>Totals</b>	0	0	0	22	1	1	3	0	1	19	0	0	6	2	1	10	1	0	67

\* Ethnicity: A (Asian), B (Black), H (Hispanic/Latino), W (White), Z (Foreign), U (Unknown)

**Table 3: Tenure promotion outcomes prior to and during grant**

College of Arts and Sciences only (excludes Engineering):

Outcome	1998		1999		2000		2001		2002		2003		2004	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
<b>Denied:</b>														
promotion with tenure	1	1	1	4	2	2		1	4	1	2	2		1
promotion to full	3	2	2		2	1				2				
promotion to associate										1				
reappointment	1	1	1		3			1	1		1			
tenure											1			
subtotal	5	4	4	4	7	3	0	2	5	4	4	2	0	1
<b>Approved:</b>														
promotion with tenure	21	9	10	7	14	12	10	7	22	7	17	8	10	8
promotion to full	13	7	8	6	7	4	18	4	12	7	13	2	20	8
reappointment	10	9	21	11	15	12	7	12	20	14	22	16	23	11
tenure--no promotion*	3	1	1	1	1	1	2	1	1	2	4		5	
extension	1	4	2	4	3	4	4	4	3	8	4	11	4	5
hired with tenure					4	3	4				5	4	5	3
subtotal	48	30	42	29	44	36	45	28	58	38	65	41	67	35

\* These individuals were already promoted to associate professor.

**Table 4: Mean years in rank by gender**

Position	Natural Sciences		Engineering		Social Sciences	
	Female	Male	Female	Male	Female	Male
Distinguished Prof	--	23.1	--	11.0	--	--
Full Prof	9.9	17.5	15.0	15.3	8.4	16.0
Assoc. Prof	8.8	10.8	10.4	10.1	7.5	13.7
Asst. Prof	2.9	2.8	2.8	2.2	3.3	2.3
Instructor	6.0	3.5	3.8	6.5	2.2	3.2
Assoc. Research Prof	6.0	--	--	10.7	--	--
Asst. Research Prof	2.0	1.0	--	5.0	--	--

\* Includes only years in individuals' most recent position, data for the mean years individuals' spend at each rank is not available.

**Table 5: Average years at institution by rank, with headcount**

College of Engineering and the Natural Sciences cluster in the College of Arts & Sciences, 2004:

<b>Rank</b>	<b>Avg Years and (N)</b>	
	Female	Male
Distinguished Prof*		30.88 (8)
Full Professor	15.58 (24)	21.45 (192)
Assoc. Prof	12.43 (23)	12.87 (85)
Asst. Prof	3.76 (21)	3.65 (74)
Assoc. Research Prof	7.50 (2)	18.67 (3)
Asst. Research Prof	7.00 (1)	7.33 (3)
Senior Research Associate	22.00 (2)	10.55 (11)
Research Associate	4.63 (59)	4.16 (161)
Senior Instructor	11.09 (11)	12.22 (18)
Instructor	7.40 (10)	7.55 (11)

\* Refer to Table 8 for more information about distinguished professors.

**Table 6: Attrition in the College of Arts & Sciences by Year and Gender**

	2000		2001		2002		2003	
	M	F	M	F	M	F	M	F
<b>Arts &amp; Humanities</b>								
Resigned		3	1	1	5	2		3
Terminal			3		1		1	1
Retired	1	1	3	4	2	1	6	1
<b>Social Sciences</b>								
Resigned	6	2	3	1	3	4	1	4
Terminal						1		
Retired	4	1	3	1	3	1	1	
<b>Natural Sciences</b>								
Resigned	2	1	3	1	8	1	1	
Terminal							2	
Retired	2		7	1	9		7	

**Table 7: Number of women in non-tenure track research and instructor positions**

College of Engineering and the Natural Sciences cluster in the College of Arts & Sciences, 2004:

Position	Full-Time		Part-Time	
	Female	Male	Female	Male
Full Research Prof				4
Assoc. Research Prof	2	3		1
Asst. Research Prof	1	3	3	3
Senior Instructor	11	18	3	1
Instructor	10	11	7	8
Senior Research Associate	2	11	2	8
Research Associate	59	161	29	30
Totals	85	207	44	51

**Table 8: Number and percent women scientists and engineers in administrative positions**

Administrative Position	Men	Women	Percent Women
<b>Natural Sciences &amp; Engineering</b>			
Institute Director	0	0	--
Chancellor	0	0	--
Dean	3	0	0%
Assoc. Dean	2	0	0%
Chair	13	5	28%
Assoc. Chair	16	6	27%
Faculty Director	10	1	9%
<i>Subtotal</i>	<i>44</i>	<i>12</i>	<i>21%</i>
<b>All Other Colleges/Schools</b>			
Institute Director	5	2	29%
Chancellor	7	3	30%
Dean	15	4	21%
Assoc. Dean	9	2	18%
Chair	22	5	19%
Assoc. Chair	22	9	29%
Faculty Director	19	13	41%
<i>Subtotal</i>	<i>99</i>	<i>38</i>	<i>28%</i>
Totals	143	50	26%

**Table 9: Number of Distinguished Professors**

*This table is provided instead of a table of endowed chairs. It also provides supplemental data to the other tables including distinguished professors, some of whom have full-time administrative appointments preventing their inclusion as faculty in certain databases (and hence their exclusion from calculations such as years in rank).*

<b>Distinguished Professors</b>	<b>College*</b>	<b>Department</b>
Linn, Robert	Education	Education
Barnes, Frank	Engineering	Electrical/Computer Engineering
Wilkinson, Charles	Law	Law
McCray, Richard	Natural Sciences	Astrophysical/Planetary Sciences
Caruthers, Marvin	Natural Sciences	Chemistry/Biochemistry
Cech, Thomas	Natural Sciences	Chemistry/Biochemistry
Lineberger, Carl	Natural Sciences	Chemistry/Biochemistry
Schmidt, Wolfgang	Natural Sciences	Mathematics
McIntosh, J. Richard	Natural Sciences	Molecular, Cellular, and Developmental Biology
Prescott, David	Natural Sciences	Molecular, Cellular, and Developmental Biology
Wieman, Carl E.	Natural Sciences	Physics
Maier, Steven	Natural Sciences	Psychology
**McIntosh, Marjorie	Social Sciences	History
**Menken, Jane	Social Sciences	Sociology

\* The College of Arts & Sciences is divided into three clusters: Natural Sciences, Social Sciences, and the Arts & Humanities. All others listed are either colleges or schools.

\*\* Female

**Table 10: Number and percentage of women scientists and engineers on promotion and tenure committees****Vice Chancellor's Advisory Committee Members**

Year	Males	Females	Total	% Female	Chair*
1997-98	10	4	14	29%	male
1998-99	12	3	15	20%	male
1999-00	11	5	16	31%	male
2000-01	13	5	18	28%	male
2001-02	12	3	15	20%	female
2002-03	8	6	14	43%	female
2003-04	9	7	16	44%	female

\*The chair is the Assoc. Vice Chancellor for Faculty Affairs and is a non-voting member. Committee members have a 3-year term and must be full professors.

**Table 11: Average salary and headcount of full-time scientists and engineers**

College of Engineering and the Natural Sciences cluster in the College of Arts & Sciences, 2004:

Position	Female	Male
Distinguished Professor	--	\$137,392
	--	(8)
Full Professor	\$91,516	\$98,646
	(24)	(192)
Associate Professor	\$73,934	\$73,783
	(23)	(85)
Assistant Professor	\$60,070	\$66,539
	(21)	(74)
Senior Instructor	\$52,818	\$65,659
	(11)	(18)
Instructor	\$36,020	\$37,960
	(10)	(11)
Assoc. Research Professor	\$75,144	\$109,285
	(2)	(3)
Asst. Research Professor	\$69,216	\$91,035
	(1)	(3)
Senior Research Associate	\$81,496	\$68,614
	(2)	(11)
Research Associate	\$40,533	\$45,985
	(59)	(161)

**Table 12: Square Footage of Office Space in a Sample of Natural Sciences Faculty, by Title in 2004**

*We selected all women faculty employed in the Natural Sciences in 2004 (n = 56) and created a random sample of 56 men in the Natural Sciences in order to determine whether there are gender differences in the square footage of their offices. This analysis includes faculty office space and will include lab space (as well as a larger sample, if not the entire faculty population) when more data becomes available.*

Title	Women		Men	
	n	sq. ft.	n	sq. ft.
Assistant Professor--Research	1	121		
Associate Professor--Research	2	171		
Assistant Professor	16	193	11	190
Associate Professor	14	228	17	158
Professor	22	170	24	178
missing data*	1		4	
total	56		56	
mean sq. ft. of office		191		174

\* Faculty in the sample who have either unknown office locations or unknown square footage.

*The data in the table above does not include differences by department, some of which allocate less office space due building size. The following table shows the average office size by department (in descending order) as a comparison to the men's and women's average office size. We believe some of the data is skewed by faculty who mistakenly identified science labs as their office space (e.g. one man in Biology EE supposedly has an office with over 700 square feet). **Until better data is accumulated**, this data suggests that women are not at an obvious disadvantage when it comes to space allocation.*

Department	avg sq. ft. in sample	Women		Men (in sample)	
		n	sq. ft	n	sq. ft.
Biology EE	356	5	289	6	412
Integrative Physiology	278	6	285	1	236
Biology MCD	230	6	257	5	198
Geography	205	6	214	2	177
Astro-Planetary Sci.	160	1	135	1	184
Geological Sci.	160	3	224	5	121
Baker RAP	158	1	158		
Physics	143	2	125	10	146
Chemistry	140	6	143	3	135
Mathematics	136	5	135	7	136
Applied Math	127	2	133	2	122
Psychology	120	12	125	10	115

**Table 13: Start-up packages**