

Diversity in Science Association

Nelson Diversity Studies

Donna Nelson, Oklahoma University

<http://chem.ou.edu/~djn/diversity/top50.html>

Website includes the following two reports:

- [A NATIONAL ANALYSIS OF DIVERSITY IN SCIENCE AND ENGINEERING FACULTIES AT RESEARCH UNIVERSITIES](#)
- [A NATIONAL ANALYSIS OF MINORITIES IN SCIENCE AND ENGINEERING FACULTIES AT RESEARCH UNIVERSITIES](#)

Website also includes tables with **detailed tenure/tenure track faculty demographic information** of “top 50” and “top 100” (as determined by research dollars) science and engineering departments. Data available includes faculty by rank, gender, and race/ethnicity and PhD attainment by gender and race/ethnicity. Data available for the following fields:

- ASTRONOMY
- BIOLOGICAL SCIENCES
- CHEMICAL ENGINEERING
- CHEMISTRY
- CIVIL ENGINEERING
- COMPUTER SCIENCE
- EARTH SCIENCES
- ECONOMICS
- MATH (AND STATISTICS)
- MECHANICAL ENGINEERING
- PHYSICS
- POLITICAL SCIENCE
- PSYCHOLOGY
- SOCIOLOGY

References

"Nelson Diversity Surveys" Donna J. Nelson, Diversity in Science Association: Norman, OK, 2004;
<http://chem.ou.edu/~djn/diversity/top50.html>

"A National Analysis of Diversity in Science and Engineering Faculties at Research Universities," Dr. Donna J. Nelson, Norman, OK. January, 2005.
<http://chem.ou.edu/~djn/diversity/briefings/Diversity%20Report%20Final.pdf>

"A National Analysis of Minorities in Science and Engineering Faculties at Research Universities," Dr. Donna J. Nelson, Norman, OK. October, 2007.
http://chem.ou.edu/~djn/diversity/Faculty_Tables_FY07/07Report.pdf

Sample Data on Faculty Demographics at "Top 50" Biological Sciences Departments

Table 14. Tenured/Tenure Track Faculty at the Top 50 Biological Sciences Departments by Race/Ethnicity, by Gender, and by Rank (FY 2007)*

University	White			Black			Hispanic			Asian			Native American			Total
	Full	Assoc	Asst	Full	Assoc	Asst	Full	Assoc	Asst	Full	Assoc	Asst	Full	Assoc	Asst	
Baylor C Medicine	35.0008	21.0010	9.0004	65.0022	-	-	-	-	-	5.0001	9	11.0002	25.0003	-	-	91.0025
Washington St. Louis	15.0004	3.0001	3.0002	21.0007	-	-	-	-	-	2	2	11.0002	25.0003	-	-	23.0007
Pennsylvania	42.0006	13.0005	16.0005	71.0016	1.0001	-	-	-	-	5.0001	1	3.0001	9.0002	-	-	81.0019
Rockefeller	33.0006	8.0002	4.0001	65.0009	-	-	-	-	-	2	2	3.0002	5.0003	-	-	71.0009
Johns Hopkins	23.0004	5.0002	3	31.0006	-	-	-	-	-	2.0001	1	1.0001	3.0003	-	-	40.0009
Wisconsin**	12.0002	4.0002	6.0003	22.0007	-	-	-	-	-	6.0001	3	4.0002	13.0003	-	-	23.0008
North Carolina Chapel Hill	60.0013	13.0003	20.0008	93.0024	2.0001	-	-	-	-	4.0002	6.0002	15.0002	25.0006	-	-	108.0028
UT MD Anderson**	21.0003	13.0002	8.0002	42.0007	-	-	-	-	-	5.0001	6.0002	14.0005	25.0008	-	-	67.0013
UT SW Med Ctr Dallas	43.0005	16.0002	25.0009	84.0016	1.0001	-	-	-	-	3.0003	4.0003	-	-	-	-	114.0028
UC Davis**	39.0010	13.0006	15.0004	67.0020	-	-	-	-	-	5.0001	2.0001	2.0001	9.0003	-	-	76.0023
Columbia NY	51.0012	12.0002	24.0011	87.0025	-	-	-	-	-	4.0002	4.0001	4	12.0003	-	-	99.0028
Vanderbilt	87.0017	39.0016	46.0019	172.0052	1	-	-	-	-	6	10.0004	9.0004	25.0008	-	-	101.0025
Yale	32.0004	13.0006	20.0010	65.0020	1	-	-	-	-	3	5.0001	4	12.0001	-	-	204.0062
Michigan	56.0014	7.0002	12.0005	75.0021	-	-	-	-	-	8.0001	1	2	11.0001	-	-	78.0022
MT	16.0003	12.0003	13.0004	41.0010	-	-	-	-	-	4	4.0002	3.0001	11.0003	-	-	89.0023
Nebraska	26.0004	14.0003	13.0003	53.0010	-	-	-	-	-	1.0001	3	3	6	-	-	54.0013
Louisiana State	23.0004	16.0004	13.0006	52.0014	-	-	-	-	-	1.0001	1	2.0001	3.0003	-	-	60.0010
Alabama Birmingham	77.0015	23.0007	23.0009	123.0031	2	-	-	-	-	4	3.0001	3.0001	10.0002	-	-	63.0018
Michigan State	11.0001	5.0001	3.0002	19.0004	2	-	-	-	-	1.0001	1	1	2	-	-	141.0034
SUNY Albany	175.0033	97.0036	50.0020	322.0089	6.0001	4.0003	4	14.0004	10.0002	6.0001	9.0002	25.0005	-	-	-	26.0005
U. TX Medical Branch	18.0004	8.0002	3.0001	29.0007	-	-	-	-	-	33.0010	20.0005	25.0007	78.0022	-	-	439.0120
Tufts	52.0008	13.0003	14.0007	79.0018	1	-	-	-	-	1.0001	1	2.0001	3.0003	-	-	33.0009
U. CA. Irvine	43.0008	14.0007	6.0004	63.0019	1	-	-	-	-	6.0002	2	8.0003	16.0005	-	-	104.0028
Washington	30.0006	32.0006	15.0008	77.0020	2	-	-	-	-	2.0001	1.0001	4.0002	7.0004	-	-	74.0024
Ohio State	11.0001	2.0001	1	14.0002	-	-	-	-	-	4	5.0001	2	11.0001	-	-	91.0022
Northwestern	75.0012	27.0008	23.0005	125.0025	1	-	-	-	-	2	2.0001	4.0002	8.0003	-	-	17.0003
Georgia	11	2	6.0004	29.0004	-	-	-	-	-	1	1.0001	3	5	-	-	136.0029
Mt. Sinai School of Med**	14.0003	9.0004	6.0002	29.0009	-	-	-	-	-	1	1.0001	5.0003	6.0003	-	-	26.0006
Oregon Health & Sci	30.0009	11.0004	9.0004	50.0017	1.0001	-	-	-	-	2	2	4	5	7.0003	16.0003	35.0012
U. of Med and Dent NJ	32.0007	16.0001	18.0004	66.0012	-	-	-	-	-	4	5	7.0003	16.0003	-	-	70.0021
Indiana**	158.0023	75.0024	19.0006	232.0053	2.0001	2	-	-	-	4	4	4	12	-	-	80.0017
Cornell	36.0003	16.0007	13.0007	65.0017	-	-	-	-	-	2	2	2	4	-	-	271.0054
Arizona	44.0006	18.0002	23.0011	85.0019	1	-	-	-	-	1	3.0001	1	5.0001	-	-	70.0017
North Carolina State	87.0014	34.0011	22.0007	143.0032	1	-	-	-	-	20.0003	10.0001	4	34.0004	-	-	92.0021
Cincinnati	30.0003	16.0004	8.0004	54.0011	-	-	-	-	-	3.0003	-	3	6.0003	-	-	180.0036
Duke	47.0007	26.0008	23.0009	96.0024	-	-	-	-	-	9.0002	7.0002	2	18.0004	-	-	64.0014
Chicago	27.0005	17.0003	4.0001	48.0009	-	-	-	-	-	1	-	-	1	-	-	118.0029
Kansas	3.0001	2.0001	5.0001	10.0003	-	-	-	-	-	5.0001	7.0002	1	13.0003	-	-	51.0010
Case Western Reserve	94.0028	22.0009	2.0002	118.0039	1	-	-	-	-	2	2	2	4	-	-	11.0003
Minnesota	35.0007	7.0005	4.0001	46.0013	1	-	-	-	-	1	-	-	1	-	-	134.0042
SUNY Stony Brook	18.0001	7.0004	2	27.0005	-	-	-	-	-	1	-	-	1	-	-	49.0013
Virginia	23.0006	20.0006	5.0001	48.0013	-	-	-	-	-	2	2	1	5	-	-	28.0005
Kentucky	73.0010	20.0005	14.0003	107.0018	1	-	-	-	-	8.0003	3.0001	6.0003	17.0007	-	-	55.0013
Harvard	60.0007	17.0006	29.0011	106.0024	-	-	-	-	-	2.0001	4	6.0001	13.0003	-	-	126.0026
Illinois Urb Champ	13.0002	6.0001	7.0003	26.0006	-	-	-	-	-	1	-	-	2	-	-	125.0028
SUNY Buffalo	25.0004	13.0005	13.0002	51.0011	-	-	-	-	-	9	3.0002	-	12.0002	-	-	30.0006
Iowa	35.0005	27.0009	9.0004	71.0018	-	-	-	-	-	1	2.0001	-	3.0001	-	-	63.0013
Connecticut	14.0005	8.0004	1	23.0009	-	-	-	-	-	1	3.0002	-	4.0002	-	-	76.0020
Illinois Chicago	35.0002	12.0003	17.0017	64.0023	-	-	-	-	-	7	5	5.0001	17.0001	-	-	29.0012
U. CA. San Diego	2121.0375	854.0271	679.0267	3654.0913	18.0003	14.0006	19.0007	51.0016	39.0003	28.0012	40.0012	107.0027	196.0040	156.0037	200.0051	552.0128
Biological Sci Total	58%	23%	19%	100%	35%	27%	37%	100%	36%	26%	37%	100%	36%	28%	36%	100%
Percent within race	48.5%	19.5%	15.5%	83.5%	0.4%	0.3%	0.4%	1.2%	0.9%	0.6%	0.9%	2.4%	4.5%	3.6%	4.6%	12.6%
Percent of grand total	17.7%	31.7%	39.3%	25.0%	16.7%	42.9%	36.8%	31.4%	7.7%	42.9%	30.0%	25.2%	20.4%	23.7%	25.5%	23.2%
Females in column																

Source: <http://chem.ou.edu/~djin/diversity/top50.html>

*By biological sciences research expenditures FY2004, NSF; www.nsf.gov/statistics/ncs06523/tables.htm#rd7; numbers after decimals designate females. **At least some data are from sources other than department chair. Reference: "The Nelson Diversity Surveys" Nelson, D. J.; Norman, OK, 2007; <http://cheminfo.chem.ou.edu/faculty/djin/diversity/top50.html>

Sample Data on Women Faculty in STEM

TABLE 4. Female Science and Engineering Faculty by Rank (FY2002)

Discipline	Assistant Professor	Associate Professor	"Full" Professor	All Ranks
Chemistry (FY2003)	4.1%	3.0%	5.1%	12.1%
Math	2.8%	2.4%	3.1%	8.3%
Computer Science	2.8%	3.8%	4.0%	10.6%
Astronomy (FY2003)	3.4%	2.4%	6.6%	12.4%
Physics	1.5%	1.4%	3.8%	6.6%
Chemical Engineering	3.8%	4.0%	2.7%	10.5%
Civil Engineering	4.8%	3.2%	1.8%	9.8%
Electrical Engineering	1.8%	2.5%	2.2%	6.5%
Mechanical Engineering	2.5%	2.3%	1.8%	6.7%
Economics	4.3%	3.0%	4.2%	11.5%
Political Science	8.6%	8.2%	6.7%	23.5%
Sociology	12.6%	11.0%	12.2%	35.8%
Psychology	9.6%	8.4%	15.4%	33.5%
Biological Sciences	6.3%	5.4%	8.4%	20.1%

Table 6. Female URM Faculty at "Top 50" Science and Engineering Departments (FY2002).

Physical Sciences and Engineering	Black females	Hispanic females	Native American females
Chemistry (FY2003)	2	5*	1
Math	2	7***	0
Computer Science	0	0	0
Astronomy (FY2003)	2*	2*	0
Physics	0	8***	0
Chemical Engineering	2	3	0
Electrical Engineering	7	3	0
Mechanical Engineering	3	2*	0
Civil Engineering	2	3*	0
Total	20	33	1
*URM female "full" professor	1	10	0
Social Sciences and Life Sciences			
Economics	5***	7***	0
Political Science	26*****	6	0
Sociology	32*****	12**	0
Psychology	22***	26*****	3
Biological Sciences	9*	13**	0
Total	94	53	3
*URM female "full" professor	19	12	0

Source: "A National Analysis of Diversity in Science and Engineering Faculties at Research Universities," Dr. Donna J. Nelson, Norman, OK. January, 2005. <http://chem.ou.edu/~djin/diversity/briefings/Diversity%20Report%20Final.pdf>

Utilization by Discipline Data

UTILIZATION BY DISCIPLINE

discipline	wh/m faculty		total			wh/m chair		critical mass	pipe-line
	%	util	female	Asian	URM	%	util		
math	78.3%	1.23	0.35	0.87	0.88	81%	1.28	N	Y
chemistry	81.7%	1.30	0.41	0.52	0.51	90%	1.43	N	Y
chem w/o bio	82.6%	1.32	0.39	0.49	0.50	-	-	N	Y
physics	81.1%	1.08	0.60	0.85	0.70	96%	1.28	N	Y
computer sci	68.9%	1.07	0.55	1.23	0.45	96%	1.21	N	N
chemical engr	73.9%	1.15	0.61	0.68	0.99	89%	1.39	N	N
civil engineering	73.3%	1.15	0.69	0.68	0.81	78%	1.22	N	N
electrical engr	66.7%	1.04	0.73	0.97	0.86	71%	1.11	N	N
mechanical engr	68.9%	1.02	0.82	0.98	0.96	81%	1.20	N	N
economics	75.9%	1.55	0.28	1.58	0.45	88%	1.81	Y	Y
political science	68.9%	1.41	0.57	0.72	0.71	86%	1.76	Y	Y
sociology	54.9%	1.12	0.87	0.71	1.05	84%	1.72	Y	Y
biological sci	71.3%	1.40	0.51	0.73	0.61	85%	1.67	Y	Y
psychology	61.6%	1.69	0.56	1.36	0.70	68%	1.87	Y	Y

URM = underrepresented minorities

Source: <http://chem.ou.edu/~din/diversity/newdiv.html>. Utilization = % faculty population/% 1983-1999 PhD population. Critical Mass and Pipeline indicators reflect data on women.