

Disparity in Female Faculty Hiring and Retention Across Science Disciplines

Dr. Donna J Nelson, University of Oklahoma, Department of Chemistry, Norman, OK 73072

Phone: 405-325-2288; Email: djnelson@ou.edu

<http://cheminfo.chem.ou.edu/faculty/djn/djn.html>

We have determined the representation of females and underrepresented minorities (URMs) among tenured and tenure track faculty at the “top 50” departments in 14 science and engineering disciplines by surveying department chairs. Our surveys provided the first data disaggregated by race, by gender, and by rank, comparable over a number of science disciplines. They reveal that underrepresented groups in different science disciplines do not face the same challenges, and so the sciences should not be regarded as one group when formulating solutions. However, similarities among sciences reveal patterns, which should reduce the enormity of the problem and yet enable targeted strategies.

TABLE 1. Gender Distribution of BS Recipients vs. Role Models

	% Females		% Males	
	Students	Faculty	Students	Faculty
Chemistry	47.3	12.1	52.7	87.9
Math	48.2	8.3	51.8	91.7
Computer Science	27.7	10.6	72.3	89.4
Astronomy	32.7	12.6	67.3	87.4
Physics	21.4	6.6	78.6	93.4
Chemical Engineering	35.7	10.5	64.3	89.5
Civil Engineering	24.5	9.8	75.5	90.2
Electrical Engineering	13.1	6.5	86.9	93.5
Mechanical Engineering	13.9	6.7	86.1	93.3
Economics	32.3	11.5	67.7	88.5
Political Science	50.1	23.5	49.9	76.5
Sociology	70.2	35.8	29.8	64.2
Psychology	76.5	33.5	23.5	66.5
Biological Sciences	58.4	20.2	41.6	79.8

Table 2 . Assistant Professors (FY2002) and PhD Attainment (1993 - 2002)* in Science and Engineering Disciplines

Discipline	White Male		Asian Male		Female		URM Male	
	Asst	PhDs	Asst	PhDs	Asst	PhDs	Asst	PhDs
Chemistry (FY2003)	65.4%	54.8%	11.5%	9.6%	21.5%	31.3%	1.6%	4.2%
Math	60.5%	58.1%	15.0%	11.3%	19.6%	27.2%	5.0%	3.3%
Computer Science	62.9%	60.6%	24.3%	15.1%	10.8%	20.5%	2.0%	3.5%
Astronomy (FY2004)	62.6%	69.8%	9.9%	6.6%	22.0%	20.6%	5.5%	2.6%
Physics	70.6%	68.9%	14.9%	13.9%	11.2%	13.3%	3.3%	3.8%
Chemical Engineering	60.7%	58.4%	16.6%	14.8%	21.4%	22.3%	1.4%	4.0%
Civil Engineering	57.9%	58.4%	11.3%	17.0%	22.3%	18.7%	8.6%	5.9%
Electrical Engineering	57.2%	59.1%	27.5%	23.9%	10.9%	11.5%	4.5%	5.5%
Mechanical Engineering	56.1%	63.4%	22.2%	21.2%	15.7%	10.4%	6.1%	5.0%
Economics	59.8%	54.9%	16.1%	9.6%	19.0%	29.3%	5.1%	6.0%
Political Science	54.2%	52.4%	4.5%	3.6%	36.5%	36.6%	4.8%	7.0%
Sociology	37.2%	31.5%	3.5%	3.0%	52.3%	58.9%	7.0%	6.5%
Psychology	46.0%	29.5%	4.6%	1.1%	45.4%	66.1%	4.0%	3.3%
Biological Sciences	55.4%	43.2%	10.7%	8.7%	30.2%	44.7%	3.7%	3.3%