DOCUMENT RESUME

ED 148 631 SE 023 768

AUTHOR Babco, Eleanor L.
TITLE Salaries of Scientists, Engineers and Technicians: A Summary of Salary Surveys. Eighth Edition.
INSTITUTION Scientific Manpower Commission, Washington, D.C.
PUB DATE Oct 77
NOTE 155p.; For earlier edition, see ED 139 626; Not available in hard copy due to copyright restrictions
AVAILABLE FROM Scientific Manpower Commission, 1776 Massachusetts Ave., N.W., Washington, D.C. 20036 ($15.00)
EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS College Teachers; *Engineers; Paraprofessional Personnel; *Salaries; Science Education; *Scientific Manpower; *Scientists; Sex Discrimination; Surveys; *Tables (Data)

ABSTRACT

This report brings together data on salaries of scientists, engineers, and technicians. The salary surveys were conducted by agencies and departments of the federal government, professional scientific and engineering societies, educational associations, magazine publishers, and other professional organizations. Most of the surveys were originally published in 1975-77. Data are reported in 138 tables organized under the following headings: starting salaries, salaries of experienced scientific and technical personnel, salaries of engineers, salaries of engineering technicians and technologists, federal salaries, and academic salaries. Statistical variables include occupation, degree level, sex, years of experience, geographic region, type of employer, and age. The base and time period of each table is noted, and a brief analysis of each group of tables is presented. No attempt has been made to evaluate the reliability of the samples. (BB)

SALARIES

OF

SCIENTISTS · ENGINEERS AND TECHNICIANS

· · · A Summary Of Salary Surveys · · ·

SMC

Prepared by

SCIENTIFIC MANPOWER COMMISSION

1776 Massachusetts Avenue, N.W., Washington, D.C. 20036

October 1977

The Scientific Manpower Commission, A Participating Organization of the American Association for the Advancement of Science, is a nonprofit corporation whose Commissioners represent its sponsoring scientific societies.

The Commission is charged with the collection, analysis and dissemination of reliable information pertaining to the manpower resources of the United States in the fields of science and technology; promotion of the best possible programs of education and training to potential scientists and technicians; and development of policies of utilization of scientific and technological manpower by educational institutions, industry and government for optimum benefit to the nation.

MEMBER SOCIETIES

American Anthropological Association

American Association for the Advancement of Science

American Astronomical Society

American Chemical Society

American Institute of Biological Sciences

American Institute of Chemists

American Institute of Physics

American Psychological Association

American Statistical Association

Conference Board of the Mathematical Sciences

Federation of American Societies for Experimental Biology

STAFF:

Betty M. Vetter - Executive Director

Eleanor L. Babco - Administrative Assistant

Judith E. McIntire - Research Assistant

Cheryl R. Jones - Secretary/Dir. of Publication Sales

PRICE: $15.00

Eighth Edition - October 1977

TABLE OF CONTENTS

INTRODUCTION

Salary surveys are conducted by a number of organizations - agencies and departments of the federal government, professional scientific and engineering societies, educational associations, magazine publishers, and other professional organizations. Some surveys deal directly with salaries of scientists and engineers while others are concerned with much broader occupational areas. When broader occupational groups are included in the surveys, selected categories are used in this report for comparative purposes.

Although most of the statistical information in this report is available from its original source, this compilation brings together summary information on salaries in the special areas of science and engineering, both for purposes of comparison and for readier accessibility.

In general, exact correlation of results of different surveys is not possible without access to the original data - first because the bases used in various surveys for presenting statistical results include medians, means and percentiles; and second because the time periods include calendar year, fiscal year, academic year and quarterly segments starting at various points in the year. The base and time period for each table is noted with the table and/or in the introductory statement for the section in which it appears.

Where comparisons of similar data are possible, some apparent discrepancies appear. No attempt has been made to evaluate the relative reliability of the samples, but the number of people in the sample is given when it is available. In many cases, the number of respondents listed within the table will not match totals for all fields or all groups, because some areas not applicable to science and engineering have been omitted, or because only selected years since first degree or selected age groups have been included.

The source is given at the beginning of each table. Full bibliographic entries for all sources of information begin on page 121.

This report was prepared by Eleanor Babco, Administrative Assistant of the Scientific Manpower Commission. Special thanks are extended to Judith McIntire and Cheryl Jones for their invaluable assistance.

STARTING SALARIES

• The *College Placement Council's A STUDY OF 1976-77 BEGINNING OFFERS; FINAL REPORT* provides beginning salary data based on job offers (not acceptances) made to college students in selected curricula and graduate programs during the normal recruiting period, September to June. Data are submitted on an ongoing basis by 160 colleges and universities throughout the United States. The survey, covering job openings in a broad range of functional areas, within employing organizations in business, industry, government and nonprofit and educational institutions, is issued three times each year - in January, March and July. Teaching offers are not included.

In the final report of the 1976-77 recruiting year, CPC reports that employers made 41% more job offers than the preceeding year at the bachelor's level, 43% more at the master's level and 33% more at the doctoral level. The greatest increases in job offers were for graduates in engineering and the sciences.

Offers to bachelor's in petroleum engineering averaged $1,512 per month - higher even than the top average for master's degree candidates, followed by chemical engineering at $1,389. The greatest percentage gain was registered by industrial engineering, which rose 10% to $1,257. Most of the sciences experienced dollar increases of seven percent to just under nine percent, with biological sciences having the top gain (8.9%) to $882, while computer science attracted the highest average, $1,123. Humanities finished last in dollar average at $810 a month (Table 1).

Beginning salary offers to women show a mixed picture. Their dollar averages were higher than those for men in all bachelor's engineering disciplines except aeronautical, but were lower in all other disciplines, in most cases, considerably lower (Table 2).

By functional area, about 50% of the offers were for engineering jobs. The engineering average of $1,283 was also highest. The engineering and accounting/auditing categories combined attracted 66% of all the offers reported at the bachelor's level (Table 3).

Tables 4 and 5 show number and average monthly salary offers to men and women bachelor's degree candidates by type of employer. Bachelor's degree candidates in technical curricula had higher average dollar offers from all types of employers; and offers to men were higher in all cases than those made to women.

At the master's level, 55% of the offers were to business majors, 33% to engineers; 9% to scientists and 2% to humanities and social science graduates. MBA's with a non-technical undergraduate degree received the most offers, followed by electrical engineers and MBA's with a technical background. Women accounted for 16% of the total master's volume, compared with 14% in 1975-76 and 12% two years ago. Women master's candidates received 49% more offers than a year ago, while men received 37% more - a reversal of the offer situation at the bachelor's level. The three leaders in master's dollar averages were chemical engineering, $1,509 a month; MBA-technical, $1,503; and mechanical engineers, $1,438 (Table 6).

At the doctoral level, the leading averages were $1,882 for chemical engineers, and $1,811 for electrical engineers. Chemistry accounted for not only the most doctoral offers, but also was the top percentage gainer, increasing 9% to $1,725 (Table 7).

• *THE ENDICOTT REPORT 1977* is the 31st annual survey of well-known business and industrial firms concerning employment trends for college graduates. Statistics from 215 large or medium-sized corporations in 26 states and Washington D. C., representing all major regions of the nation, indicate that companies planned to hire 16% more

college graduates at the bachelor's level in 1977 than were employed from 1976 classes. At the master's level, the increase is also 16%. In greatest demand will be graduates in engineering, accounting, business administration, and sales.

These companies indicate a raise in starting salaries from four to seven percent. Predicted averages for 1977 indicate that bachelor's degree graduates in engineering will be offered about $1,242 per month, accountants about $1,067, graduates in business administration about $887, and liberal arts graduates about $866 per month. Master's degree graduates in engineering will receive average monthly salaries of $1,430, followed by those in accounting at $1,267, and those with the MBA with a technical undergraduate degree about $1,476 (Table 9).

Although engineers show the highest starting salaries, an examination of the average monthly earnings of college graduates employed five years ago (class of 1971) and ten years ago (class of 1966) found accounting graduates earning higher monthly salaries than those in engineering (Table 8).

- Starting salaries for chemists were up at all degree levels according to the *American Chemical Society's 1976 SURVEY REPORT OF STARTING SALARIES AND EMPLOYMENT STATUS OF CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES*. Although chemical engineers receive much higher starting salaries than do chemists, in 1976 the percent gains were smaller for chemical engineers than for chemists at the bachelor's and Ph.D. levels.

Industry paid inexperienced chemists the highest starting salaries at all degree levels. New B.S. chemists in industry earn $11,700 compared to $9,000 for those who began work for the federal government and $8,400 for those employed in colleges and universities. The same held true for chemical engineers, with B.S. graduates employed in industry earning $15,480 per year (Table 15 and Charts 1, 2 and 3).

Starting salaries for men and women of the same level of education are nearing equality with the female-to-male ratio at the master's and Ph.D. levels 0.96 and 0.98 respectiyely. At the bachelor's level, starting salaries for women chemists are 1% higher than for men (Table 10). Table 11 gives trend data for men and women chemists' salaries at the B.S. level.

By type of employer, B.S. women chemists working in industry, state and local governments, and hospitals and independent labs earned more than their male counterparts (Table 13). Women chemical engineers at the bachelor's level had higher starting salaries at all types of employers (Table 16).

By chemical specialty, master's degree analytical chemists earned the most, followed by physical chemists. At the doctoral level, general chemists had the highest starting salaries (Table 12).

By geographic region, B.S. chemists earned most in the mountain area; M.S. chemists in the east north central and Ph.D. chemists in the west south central. B.S. chemical engineers working in the west south central earned the most, while M.S. chemical engineers in the west south central and the middle Atlantic regions had the highest earnings (Table 14).

Median annual starting salaries of minority chemists and chemical engineers are shown in Table 17. They are below the average for men at all degree levels for chemists (Table 13), but very close to those for male chemical engineers (Table 16).

- The *American Institute of Physics* reports that industry was not only the largest employer of new physics bachelor's degree recipients, but also paid the highest starting salaries. Men earned higher starting salaries than did their women counter-

parts with every type of employer except industry, where women received $1,100 per month and men $1,036; and government, where they received the same salary of $1,000 per month (Table 18).

Industry again paid the highest starting salary to graduate physicists in 1975-76 - $1,130 for master's degree recipients and $1,590 for doctoral degree recipients. It is particularly interesting to note that the overall monthly starting salary of $1,100 for master's degree recipients did not change from 1974-75 to 1975-76. Salaries offered by secondary schools remained constant, those in industry rose only $5 per month, dropped $150 per month in the "other" category, but rose substantially in the federal government - from $1,125 to $1,350. For doctorate recipients, the overall salary figure rose from $1,250 to $1,300 between 1974-75 and 1975-76, with government salary offers again experiencing the highest percentage increase (Table 19).

- The annual starting salary survey for 1975-76 doctoral recipients by the *American Mathematical Society* found that 80% were employed in academic positions, 11% held positions in business and industry and 9% in government, including, federal, state and provincial governments. Business and industry paid the highest salaries to mathematics Ph.D.'s (Table 20). Table 21 presents median beginning salaries in mathematics for Ph.D.'s by type of employer for the period 1972 through 1976.

- The ninth annual *NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES*, conducted by the *Battelle Columbus Laboratories*, reports that engineers led other disciplines in highest starting salaries for all degree levels in 1976 (Table 22). Of the various engineering disciplines that were studied, chemical engineering graduates were paid the highest starting salaries - $1,277, followed by materials engineering graduates at $1,237 (Table 23).

- The *U.S. Department of Labor's OCCUPATIONAL OUTLOOK HANDBOOK* includes starting salary information and estimates the number of personnel employed in various fields. A selected list of scientific and engineering personnel data are summarized in Table 24.

- Starting salaries of bachelor's degree and associate degree technology graduates are reported by the *Engineering Manpower Commission* (Tables 25 and 26). Bachelor's degree technology graduates who received their degree in aerospace technology received the highest starting salary ($1,121 per month), while associate degree technology graduates in environmental technology had the highest starting salaries among the two-year graduates - $913 per month.

- The *Institute of Food Technologists* reports that industry hired most of the new graduates in food technology, but government paid the highest starting salaries (Table 29).

- Starting salary offers for graduates of two-year colleges are collected by the *Middle Atlantic Career Counseling Association*. In the 1975-76 academic year, graduates of secretarial science and nursing received the highest number of offers. However, graduates of X-Ray technology received the highest annual salary, $10,400 (Table 27). Starting salary offers by type of employer for graduates of two-year colleges are shown in Table 28.

SOURCE: The College Placement Council, A Study of 1976-77 Beginning Offers, Final Report, July 1977.

TABLE I

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM, 1976-77

CURRICULUM	No. Offers 1976-77 Total	AVERAGE $ OFFER		1976-77 Total Change from 1975-76 Total (=100)
		1976-77 Total	1975-76 Total	
BUSINESS				
Accounting	6,320	$1,062	$1,018	104.3
Business-General (includes Management)	3,649	927	872	106.3
Marketing & Distribution	1,586	896	840	106.7
ENGINEERING				
Aeronautical	509	1,226	1,153	106.3
Chemical	4,026	1,389	1,279	108.6
Civil	2,178	1,185	1,108	106.9
Electrical	6,106	1,245	1,155	107.8
Industrial	1,066	1,257	1,139	110.4
Mechanical	5,446	1,286	1,197	107.4
Metallurgical (includes Metallurgy & Engineering Ceramics)	512	1,315	1,212	108.5
Petroleum	506	1,512	1,398	108.2
Technology	876	1,177	1,083	108.7
HUMANITIES AND SOCIAL SCIENCES				
Humanities	1,018	810	775	104.5
Social Sciences	1,275	863	820	105.2
SCIENCES				
Agricultural	652	924	852	108.5
Biological	238	882	810	108.9
Chemistry	331	1,102	1,028	107.2
Computer	1,323	1,123	1,038	108.2
Health (Medical) Professions	355	894	833	107.3
Mathematics	554	1,073	986	108.8
Other Physical & Earth Sciences	171	1,068	1,050	101.7

SOURCE: The College Placement Council, A Study of 1976-77 Beginning Offers, Final Report, July 1977.

TABLE 2

AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM AND SEX, 1976-77 AND 1975-76

CURRICULUM	No. Offers 1976-77 Total		Average $ Offers 1976-77 Total		No. Offers 1975-76 Total		Average $ Offers 1975-76 Total	
	Men	Women	Men	Women	Men	Women	Men	Women
BUSINESS								
Accounting	4,728	1,592	$1,062	$1,061	3,964	1,177	$1,017	$1,021
Business-General (inc. Management)	2,805	844	933	908	2,154	551	876	860
Marketing & Distribution	1,064	522	915	858	838	407	853	814
ENGINEERING								
Aeronautical	480	29	1,227	1,222	181	11	1,152	1,178
Chemical	3,299	727	1,386	1,401	2,535	447	1,278	1,283
Civil	1,942	236	1,178	1,246	1,552	130	1,104	1,153
Electrical	5,789	317	1,244	1,262	3,488	189	1,154	1,175
Industrial	950	116	1,255	1,280	658	56	1,137	1,164
Mechanical	5,117	329	1,284	1,319	3,255	229	1,195	1,226
Metallurgical*	451	61	1,313	1,324	229	32	1,212	1,210
Petroleum	485	21	1,511	1,517	331	17	1,399	1,388
Technology	830	46	1,175	1,209	540	19	1,083	1,093
HUMANITIES & SOCIAL SCIENCES								
Humanities	507	511	866	754	291	375	816	743
Social Sciences	667	608	904	819	638	587	866	770
SCIENCES								
Agricultural	550	102	929	897	420	59	856	826
Biological	156	82	892	863	125	87	820	795
Chemistry	205	126	1,103	1,101	182	124	1,011	1,052
Computer	950	373	1,127	1,114	490	169	1,035	1,045
Health (Medical Professions)	55	300	961	881	52	312	883	825
Mathematics	252	302	1,081	1,066	211	310	992	982
Other Physical & Earth Sciences	131	40	1,069	1,067	70	33	1,053	1,043

*Includes Metallurgy & Engineering-Ceramics.

SOURCE: The College Placement Council, A Study of 1976-77 Beginning Offers, Final Report, July 1977.

TABLE 3

NATIONAL AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY FUNCTIONAL AREA AND SEX, 1976-77 AND 1975-76

FUNCTIONAL AREA	No. Offers 1976-77 Total		Average $ Offers 1976-77 Total		No. Offers 1975-76 Total		Average $ Offers 1975-76 Total	
	Men	Women	Men	Women	Men	Women	Men	Women
Accounting/Auditing	4,679	1,618	$1,065	$1,060	3,910	1,198	$1,018	$1,019
Business Administration	1,161	446	940	849	800	308	885	780
Communications	145	108	829	721	112	82	816	674
Community and Service Organizations Work	92	97	747	702	82	82	784	689
EDP - Programming/Systems	1,094	536	1,115	1,090	579	279	1,019	998
Engineering	17,531	1,741	1,279	1,328	11,171	984	1,190	1,228
Farm and Natural Resources Management	168	25	895	941	132	14	856	759
Finance and Economics	519	208	936	927	362	155	883	890
Health (Medical) Services	81	333	937	864	77	341	847	811
Home Economics and Dietetics	6	34	853	685	15	44	824	710
Law Enforcement Services	45	11	933	798	64	17	896	796
Library and Related Work	9	10	742	598	4	16	705	613
Manufacturing and/or Industrial Operations	956	122	1,212	1,122	785	118	1,113	1,084
Marketing - Consumer Product /Services	1,019	359	931	890	760	264	870	835
Marketing - Industrial Product/Services	533	126	1,055	1,029	487	115	1,016	996
Mathematics/Statistics	198	149	1,016	1,016	113	147	954	955
Merchandising /Sales Promotion	801	519	883	812	691	382	820	756
Personnel/Employee Relations	143	91	973	869	86	60	917	822
Public Administration	78	33	879	762	53	21	847	790
Research - Non-Scientific	88	51	990	789	74	50	953	919
Research - Scientific	506	192	1,119	1,062	341	155	1,070	1,010
Rotational Training - Technical	756	102	1,241	1,195	764	145	1,128	1,089
Rotational Training - Non-Technical	805	373	911	866	742	344	852	839

SOURCE: The College Placement Council, A Study of 1976-77 Beginning Offers, Final Report, July 1977.

TABLE 4

NUMBER AND AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES IN NON-TECHNICAL CURRICULA BY TYPE OF EMPLOYER AND SEX, 1976-77

TYPE OF EMPLOYER	No. Offers 1976-77 Total			Average $ Offers		
	Total	Men	Women	Overall	Men	Women
Business	8,769	6,153	2,616	$ 965	$ 983	$ 921
Federal Government	209	165	44	868	871	857
State & Local Government	352	221	131	859	903	787
Manufacturing/Industrial	4,211	3,102	1,109	1,014	1,017	1,004
Non-Profit & Educational Organizations	307	130	177	732	789	691

TABLE 5

NUMBER AND AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES IN TECHNICAL CURRICULA BY TYPE OF EMPLOYER AND SEX, 1976-77

TYPE OF EMPLOYER	No. Offers 1976-77 Total			Average $ Offers		
	Total	Men	Women	Overall	Men	Women
Business	666	498	168	$ 983	$ 993	$ 950
Federal Government	567	508	59	1,029	1,033	994
State & Local Government	384	344	40	982	998	846
Manufacturing/Industrial	22,784	20,172	2,612	1,271	1,271	1,266
Non-Profit & Educational Organizations	448	120	328	890	943	871

SOURCE: The College Placement Council, A Study of 1976-77 Beginning Offers, Final Report, July 1977.

TABLE 6

NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO MASTER'S DEGREE CANDIDATES BY CURRICULUM, 1976-77 AND 1975-76

CURRICULUM	No. Offers 1976-77 Total	AVERAGE $ OFFERS		1976-77 Total Change from 1975-76 Total (=100)
		1976-77 Total	1975-76 Total	
ENGINEERING				
Chemical	837	$1,509	$1,407	107.2
Civil	345	1,342	1,251	107.3
Electrical	1,470	1,410	1,319	106.9
Industrial	231	1,413	1,288	109.7
Mechanical	1,016	1,438	1,341	107.2
Nuclear (including Engineering Physics)	133	1,362	1,294	105.3
SCIENCES				
Geology & related Geological Sciences	253	1,416	1,313	107.8
Chemistry	111	1,321	1,234	107.1
Computer	544	1,380	1,262	109.4
Mathematics	118	1,285	1,305	98.5
Metallurgy (including Metallurgical Engineering, Materials Engineering & Science and Ceramics)	125	1,405	1,339	104.9
BUSINESS				
Accounting	751	1,247	1,201	103.8
Business Administration, Industrial Management (MBA)				
After Non-Technical Undergraduate Degree	4,709	1,410	1,323	106.6
After Technical Undergraduate Degree	1,256	1,503	1,385	108.5
HUMANITIES AND SOCIAL SCIENCES				
Humanities	134	1,004	963	104.3
Social Sciences	160	1,036	1,009	102.7

SOURCE: The College Placement Council, A Study of 1976-77 Beginning Offers, Final Report, July 1977.

TABLE 7

NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO DOCTORAL DEGREE CANDIDATES BY CURRICULUM, 1976-77 AND 1975-76

CURRICULUM	No. Offers 1976-77 Total	AVERAGE $ OFFERS		1976-77 Total Change from 1975-76 Total (=100)
		1976-77 Total	1975-76 Total	
ENGINEERING				
Chemical	180	$1,882	$1,793	105.0
Civil	13	1,625	1,597	101.8
Electrical	170	1,811	1,693	107.0
Mechanical	49	1,777	1,687	105.3
SCIENCES				
Chemistry	263	1,725	1,582	109.0
Mathematics (including Operations, Research, Statistics & Actuarial Science)	56	1,704	1,569	108.6
Metallurgy (including Metallurgical Engineering, Materials Engineering & Science & Ceramics)	39	1,749	1,695	103.2
Physics	71	1,698	1,639	103.6

SOURCE: Trends in Employment of College and University Graduates in Business and Industry, 1977, Thirty First Annual Report, By Frank S. Endicott

TABLE 8

NUMBER AND 1976 MEDIAN MONTHLY SALARY OF GRADUATES EMPLOYED FIVE YEARS AGO (CLASS OF 1971) AND EMPLOYED TEN YEARS AGO (Class of 1966)

F I E L D	Employed 5 Years Ago		Employed 10 Years Ago	
	Number	Salary	Number	Salary
Engineering	1,083	$1,658	595	$2,045
Accounting	1,197	1,720	42	2,275
Sales	426	1,637	30	1,939
General Business	1,203	1,448	44	1,942

SOURCE: Trends in Employment of College and University Graduates in Business and Industry, 1977, Thirty First Annual Report, by Frank S. Endicott.

TABLE 9

NUMBER AND AVERAGE STARTING MONTHLY SALARIES FOR NEW GRADUATES BY FIELD, AND DEGREE, 1976 AND 1977

FIELD	BACHELOR'S DEGREE				MASTER'S DEGREE			
	# to be hired in 1977	1977	1976	Percent increase	# to be hired in 1977	1977	1976	Percent increase
Engineering (121)	3,745	$1,242	$1,165	6.6	597	$1,430	$1,353	5.7
Accounting (113)	3,791	1,067	1,033	3.3	1,184	1,267	1,224	3.5
Sales-Marketing (69)	1,087	978	943	3.7				
Business Adm. (82)	1,648	887	852	4.1				
Liberal Arts (43)	876	866	835	3.7				
Chemistry (30)	165	1,108	1,032	7.3				
Math-Statistics (45)	354	1,045	994	5.1				
Economics-Finance (31)	202	943	887	6.3				
Other Field (50)	854	1,032	985	4.8	153	1,255	1,217	3.1
Other Technical Fields					196	1,315	1,239	6.1
MBA with Technical BS					284	1,476	1,388	6.3
MBA with Non-Technical BA					695	1,385	1,315	5.3

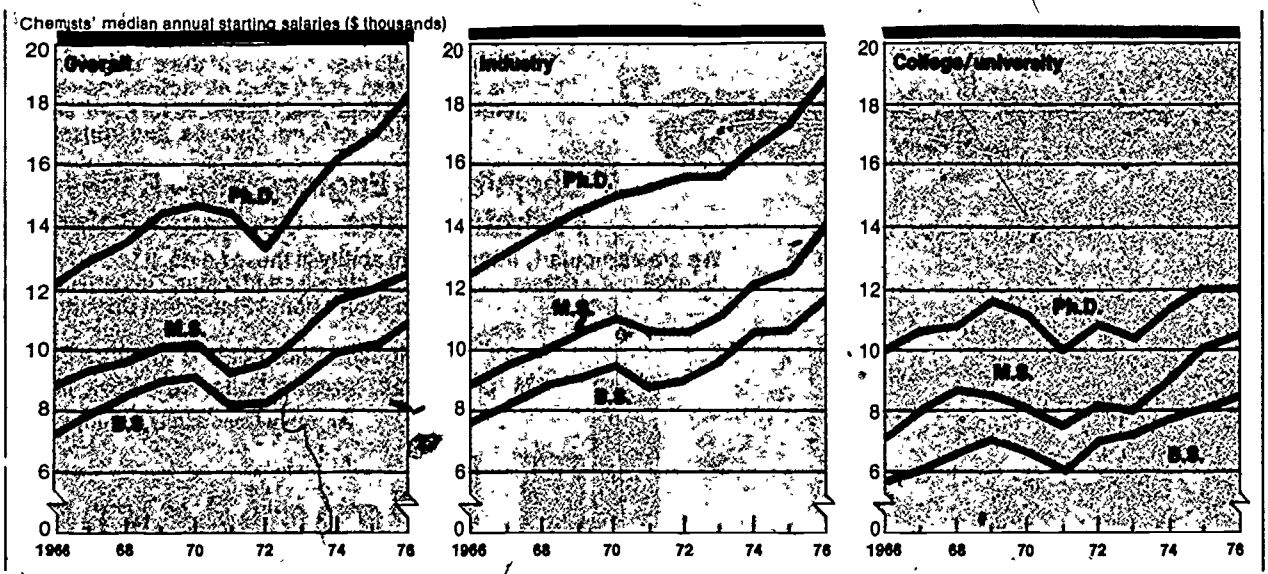
Note: Number of hiring companies for 1977 at bachelor's level in parenthesis.

SOURCE: CHEMICAL AND ENGINEERING NEWS, October 25, 1976

CHART 1 - OVERALL MEDIAN ANNUAL STARTING SALARIES FOR CHEMISTS BY DEGREE LEVEL, 1966-1976

CHART 2 - MEDIAN ANNUAL STARTING SALARIES FOR CHEMISTS IN INDUSTRY BY DEGREE LEVEL, 1966-1976

CHART 3 - MEDIAN ANNUAL STARTING SALARIES FOR CHEMISTS IN COLLEGES & UNIVERSITIES BY DEGREE LEVEL, 1966-1976



SOURCE: American Chemical Society, 1976 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, November 1976.

TABLE 10

NUMBER AND MEDIAN ANNUAL STARTING SALARIES OF CHEMISTS AND CHEMICAL ENGINEERS BY HIGHEST DEGREE EARNED AND SEX, 1976

HIGHEST DEGREE EARNED	CHEMISTS		CHEMICAL ENGINEERS	
	Men	Women	Men	Women
Bachelor's	(291) $10,800	(145) $10,900	(455) $15,360	(68) $15,600
Master's	(67) 12,500	(23) 12,000	(86) 16,620	(4) 16,100
Doctorate	(131) 18,300	(19) 18,000	(41) 20,700	(1) 20,100

SOURCE: CHEMICAL AND ENGINEERING NEWS, American Chemical Society, November 5, 1962; October 28, 1963; November 9, 1964; October 18, 1965; October 23, 1967; October 21, 1968; November 23, 1970; October 2, 1972; 1973, 1974, 1975 and 1976 Survey Reports, Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates.

TABLE 11

MEDIAN MONTHLY STARTING SALARIES FOR MEN AND WOMEN CHEMISTS, BACHELOR'S LEVEL, 1961-1976

YEAR	MEN	WOMEN	% BELOW MEN
1961	$500	$433	13.4
1962	525	450	14.2
1963	550	473	14.0
1964	560	480	14.2
1965	590	499	15.4
1966	625	550	12.0
1967	660	600	10.0
1968	712	625	12.8
1969	750	702	6.9
1970	758	644	17.7
1971	691	650	5.9
1972	708	650	8.2
1973	750	708	5.9
1974	816	833	+2.1
1975	833	801	3.8
1976	900	908	+1.0

12

SOURCE: American Chemical Society, 1976 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, November 1976.

TABLE 12

NUMBER, MEDIAN, AND MEAN ANNUAL STARTING SALARIES OF GRADUATE CHEMISTS BY CHEMICAL SPECIALTY, 1976

CHEMICAL SPECIALTY	M. S.			PH. D.		
	No.	Median	Mean	No.	Median	Mean
Analytical	19	$14,300	$14,285	20	$18,000	$17,396
Biochemistry	6	9,500	10,640	5	12,000	12,700
Inorganic	9	12,000	11,532	30	16,500	15,915
Organic	29	12,000	12,225	46	18,500	17,790
Physical, Theoret.	6	12,800	12,333	35	18,500	17,314
Polymer, Macromol.	*	*	*	5	18,000	18,550
Chemistry, General	12	10,500	11,990	3	20,700	21,180
Pharma., Med., Cln.	2	9,713	11,357	*	*	*
Other	7	10,922	10,658	6	16,500	16,393
All Specialties	90	12,400	12,320	150	18,300	17,119

* Data not available

TABLE 13

NUMBER AND MEDIAN STARTING SALARIES OF CHEMISTS BY DEGREE, TYPE OF EMPLOYER AND SEX, 1976

TYPE OF EMPLOYER	MEN			WOMEN		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
Industry, Private	(215) $11,500	(37) $14,100	(91) $18,900	(98) $12,000	(15) $14,000	(11) $18,760
Government, Federal	(11) 9,000	(7) 11,046	(9) 17,000	(4) 9,000	(1) 13,482	* *
Government, State & Local	(10) 9,604	(3) 10,922	* *	(5) 10,524	* *	* *
College/University	(16) 8,400	(9) 10,600	(29) 12,000	(13) 8,200	(2) 8,400	(7) 11,500
High School	(15) 8,800	(4) 9,000	* *	(9) 8,700	(1) 8,200	* *
Hospital/Independent Lab.	(21) 9,500	(6) 9,600	* *	(15) 9,600	(2) 9,713	* *
Non Profit Research Inst.	(3) 9,000	(1) 9,024	(1) 20,700	(1) 8,400	(2) 9,000	(1) 17,200
All Employers	(291) 10,800	(67) 12,500	(131) 18,300	(145) 10,900	(23) 12,000	(19) 18,000

* Data not available.

SOURCE: American Chemical Society, 1976 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, November 1976.

TABLE 14

NUMBER AND MEDIAN STARTING SALARIES OF CHEMISTS AND CHEMICAL ENGINEERS BY DEGREE LEVEL AND GEOGRAPHIC REGION, 1976

GEOGRAPHIC REGION	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	PH.D.	B. S.	M. S.	Ph.D.
Pacific	(29) $11,000	(5) $10,500	(13) $14,500	(41) $15,300	(8) $16,000	(7) $20,200
Mountain	(13) 11,700	(3) 11,200	(7) 16,667	(18) 15,600	(1) 15,000	(1) 21,220
West North Central	(36) 9,700	(3) 12,600	(7) 19,100	(30) 15,000	(3) 15,700	*
West South Central	(37) 11,000	(16) 13,478	(10) 19,200	(100) 15,800	(11) 16,800	(9) 21,000
East North Central	(118) 11,400	(12) 13,500	(25) 18,300	(102) 15,300	(23) 16,500	(10) 20,163
East South Central	(14) 9,528	(4) 9,000	(4) 15,600	(21) 15,300	(2) 15,000	*
Middle Atlantic	(114) 10,920	(26) 12,000	(50) 18,200	(106) 15,300	(25) 16,800	(8) 20,700
South Atlantic	(49) 9,800	(15) 12,800	(21) 18,500	(84) 15,400	(13) 16,620	(6) 20,700
New England	(26) 10,400	(6) 11,500	(13) 18,000	(16) 14,500	(4) 15,600	(1) 13,900

* Data not available.

TABLE 15

NUMBER AND MEDIAN STARTING SALARIES OF CHEMISTS AND CHEMICAL ENGINEERS BY DEGREE LEVEL AND TYPE OF EMPLOYER, 1976

TYPE OF EMPLOYER	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
Industry, Private	(313) $11,700	(52) $14,000	(102) $18,780	(515) $15,480	(86) $16,800	(33) $21,000
Government, Federal	(15) 9,000	(8) 11,046	(9) 17,000	(6) 12,886	(1) 15,000	(1) 20,200
Government, State & Local	(15) 9,800	(3) 10,922	* *	* *	* *	* *
College/University	(29) 8,400	(11) 10,500	(36) 12,000	* *	(2) 16,500	(7) 16,600
High School	(24) 8,700	(5) 9,000	* *	* *	* *	* *
Hospital/Independent Lab.	(36) 9,500	(8) 9,713	* *	* *	* *	* *
Nonprofit Research Inst.	(4) 8,400	(3) 9,024	(2) 17,200	(2) 14,700	(1) 16,000	(1) 16,800
All Employers	(436) 10,800	(90) 12,400	(150) 18,300	(523) 15,420	(90) 16,620	(42) 20,700

* Data not available.

SOURCE: American Chemical Society, 1976 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, November 1976.

TABLE 16

NUMBER AND MEDIAN STARTING SALARIES OF CHEMICAL ENGINEERS BY DEGREE, TYPE OF EMPLOYER AND SEX, 1976

TYPE OF EMPLOYER	MEN			WOMEN		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
Industry, Private	(448) $15,360	(83) $16,800	(32) $21,000	(66) $15,600	(3) $17,200	(1) $20,700
Manufacturing Industry	(394) 15,400	(60) 16,800	(23) 21,000	(58) 15,600	(3) 17,200	(1) 20,700
Non-manufacturing Industry	(54) 15,200	(23) 16,320	(9) 20,700	(8) 15,300	* *	* *
College/University	* *	(2) 16,500	(7) 16,600	* *	* *	* *
Federal Government	(5) 12,886	* *	(1) 20,200	(1) 14,700	(1) 15,000	* *
Nonprofit Research Inst.	(1) 14,700	(1) 16,000	(1) 16,800	(1) 15,600	* *	* *
All Employers	(455) 15,360	(86) 16,620	(41) 20,700	(68) 15,600	(4) 16,100	(1) 20,700

* Data not available

TABLE 17

NUMBER AND MEDIAN ANNUAL STARTING SALARIES OF MINORITY CHEMISTS AND CHEMICAL ENGINEERS BY HIGHEST DEGREE EARNED, 1976

HIGHEST DEGREE EARNED	CHEMISTS	CHEMICAL ENGINEERS
Bachelor's	(18) $ 9,648	(17) $15,300
Master's	(8) 9,500	(9) 16,380
Doctorate	(10) 16,000	(9) 20,400

SOURCE: American Institute of Physics, Survey of 1975-76 Physics and Astronomy Bachelor's Degree Recipients, AIP Pub. R-211.8, February 1977.

TABLE 18

DISTRIBUTION AND MEDIAN MONTHLY STARTING SALARIES OF PHYSICS BACHELOR'S DEGREE RECIPIENTS BY TYPE OF EMPLOYER AND SEX, 1975-76.

TYPE OF EMPLOYER	MEN (411 Reported Salaries)		WOMEN* (81 Reported Salaries)		TOTAL (492 Reported Salaries)	
	Distribution by Employer	Median	Distribution By Employer	Median	Distribution By Employer	Median
Industry - Mfg.	28%	$1,036	39%	$1,100	30%	$1,047
Industry - Service	19	960	17	867	19	938
High School	10	771	19	750	11	765
College or University	4	843	4	700	4	813
Government**	26	900	7	875	23	900
Research Institute	3	1,000	6	1,000	3	1,000
Other	10	750	10	700	10	714
TOTAL	100	$915	100	$880	100	$905

* Includes accepted and continuing Employment
** Career military salaries are included.

SOURCE: American Institute of Physics, 1974-75 Graduate Student Survey, AIP Pub. No. R-207.8, September 1976 and 1975-76 Graduate Student Survey, AIP Pub. No. R-207.9, July 1977.

TABLE 19

MEDIAN MONTHLY STARTING SALARIES OF GRADUATE PHYSICISTS, 1975 AND 1976

EMPLOYER	TERMINAL MASTER'S RECIPIENTS				DOCTORATE RECIPIENTS							
	% Accepting Positions		Salary		% Accepting Postdocs.		Probable Permanent Positions		Postdoc. Fellowships		Salary	
	1975	1976	1975	1976	1975	1976	1975	1976	1975	1976	1975	1976
4-Year College	-	-	*	*	1%	*	4%	5%	*	*	$1,060	$1,040
University	8%	12%	*	$ 900	35	33%	23	18	$ 955	$1,005	1,050	1,070
Secondary School	15	11	$ 860	860	-	-	1	-	-	-	*	-
Industry	38	38	1,125	1,130	1	*	16	18	*	*	1,530	1,590
Government	31	24	1,125	1,350	2	4	5	6	1,050	1,244	1,290	1,625
FFRC°	4	5	*	-	3	4	4	6	1,050	1,100	1,480	1,530
Other	4	10	1,050	900	1	3	4	3	*	1,050	*	1,100
All Employers	100	100	$1,100	$1,110	100					1,010	1,250	1,300

*Fewer than 20 graduates reported salaries.
° Federally-funded Research Center.

16

SOURCE: American Mathematical Society, NOTICES, Vol. 23, No. 6, Issue No. 172 October 1976

TABLE 20

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER AND SEX, 1975 AND 1976

TYPE OF EMPLOYER	MEN		WOMEN	
	1976	1975	1976	1975
Teaching or Teaching & Research (9 months)	(223) $13,400	$13,000	(33) $12,500	$12,600
Research (9 months)	(4) 8,000	-	-	-
Teaching or Teaching & Research (12 months)	(53) 15,000	14,500	(9) 17,400	-
Research (12 month)	(8) 12,100	11,900	(1) 19,500	-
Business & Industry (12 months)	(45) 20,600	18,900	(2) -	17,500
Government (12 months)	(24) 19,400	18,500	(2) 19,400	10,000

TABLE 21

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER, 1972-1976

TYPE OF EMPLOYER	1976	1972	1973	1974	1975
Teaching* (9 months)	-	$11,500	$11,600	-	-
Teaching & Research* (9 months)	-	11,500	11,700	-	-
Teaching or Teaching & Research * (9 months)	$13,300	-	-	$12,100	$12,800
Research (9 months)	8,000	11,100	11,100	8,000	-
Teaching* (12months)	-	12,400	12,700	-	-
Teaching & Research (12 months)	-	12,500	15,900	-	-
Teaching or Teaching & Research* (12 months)	15,500	-	-	13,800	14,500
Research (12 months)	13,000	12,500	15,000	9,500	11,900
Business & Industry (12 months)	20,500	18,100	18,000	19,000	18,700
Government (12 months)	19,400	15,500	16,800	19,700	18,200

* Figures in the Teaching and the Teaching and Research categories compiled in 1974 are not comparable to those for prior years; the two categories were combined in 1974.

NOTE: Dashes indicate that not enough returns were received to warrant including the figures.

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1976.

TABLE 22

NUMBER AND MEAN MONTHLY STARTING SALARIES OF NONSUPERVISORY EMPLOYEES ENGAGED IN R & D ACTIVITIES BY FIELD OF DEGREE AND DEGREE LEVEL, 1976

FIELD OF DEGREE	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	No.	Salary	No.	Salary	No.	Salary
Engineering	318	$1,141	53	$1,287	14	$1,728
Chemistry	33	975	1	1,225	11	1,393
Physics	10	990	2	1,075	5	1,665
Life Sciences	15	831	-	-	6	1,141
Math & Statistics	66	1,018	5	1,185	3	1,675
Social Sciences	4	925	1	1,175	2	1,675

TABLE 23

NUMBER AND MEAN STARTING SALARIES OF NONSUPERVISORY ENGINEERING BACHELOR'S DEGREE EMPLOYEES ENGAGED IN R &.D ACTIVITIES BY WORKING-AS-OCCUPATION, 1976

Working-As-Occupation	Number	Salary
Aeronautical Engineering	23	$1,070
Chemical Engineering	41	1,277
Electrical Engineering	166	1,159
Materials Engineering	4	1,237
Mechanical Engineering	32	1,168
Metallurgical Engineering	2	1,175
Nuclear Engineering	7	1,082

SOURCE: U.S. Department of Labor, Occupational Outlook Handbook, 1976-77 Edition,

TABLE 24

STARTING SALARIES OF SCIENTISTS BY FIELD, TYPE OF EMPLOYER, AND HIGHEST DEGREE ATTAINED, 1974

F I E L D	Estimated Number Employed in 1974	TYPE OF EMPLOYER					
		Private Industry			Federal Government		
		B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
Engineers	1,100,000	$11,940	$13,700	$18,000	$ 8,500 10,520	$10,520 12,841	$15,481 18,463
Mathematicians	40,000	10,300	12,500	16,000	8,500 10,520	12,841 15,481	15,481 18,463
Statisticians	24,000	10,000	12,500	16,000	8,500 10,520	12,841 15,481	15,481 18,463
Life Sciences	190,000				8,500 10,520	10,520 12,841	15,481 18,463
Agricultural	50,000	9,420					
Biological	75,000	8,640					
Biochemists	12,400	15,000	15,100	21,500			
Foresters	24,000				8,500	10,500	12,841 15,463
Geologists	23,000	10,500	12,200	16,000	8,500 10,520	10,520 12,841	15,481 18,463
Geophysicists	8,200	10,500	12,200	16,000	8,500 10,520	10,520 12,841	15,481 18,463
Meteorologists	5,600				8,500 10,520	10,520 12,841	15,481 18,463
Chemists	135,000	10,200	12,000	16,800	8,500 10,520	12,841	15,481 18,463
Physicists	48,000	10,700	12,800	17,800	8,500 10,520	10,520 12,841	15,481 18,463
Astronomers	2,000				8,500 10,520	10,520 12,841	15,481 18,463
Oceanographers	2,500				8,500 10,520	10,520 12,841	15,481 18,463
Psychologists	75,000		11,000	13,000			15,481 18,463
Anthropologists	3,800			13,000	8,500 10,520	12,841	15,481
Economists	71,000			13,000	8,500 10,520	12,841	15,481
Political Scientists	11,500				8,500 10,520	12,841	15,481
Sociologists	14,000				8,500 10,520	12,841	15,481
Programmers	200,000	$170 - $240*					

* Weekly Salary.

SOURCE: Engineering Manpower Commission, Prospects of Engineering and Technology Graduates 1976, January 1977

TABLE 25

NUMBER AND MEAN MONTHLY STARTING SALARIES OF BACHELOR'S DEGREE TECHNOLOGY GRADUATES BY CURRICULUM, 1976

CURRICULUM	No. of Schools	No. of Salaries	Mean Non-ECPD Schools*	Mean ECPD Schools*	OVERALL Mean
Aerospace	2	22		$1,121	$1,121
Civil & Related	26	366	$ 992	985	986
Computer	3	26	-	972	972
Electrical & Electronic	28	419	1,067	1,058	1,060
Industrial	15	212	920	1,031	991
Mechanical	25	265	1,080	1,031	1,041
General & Other	20	223	1,103	1,049	1,070
All Curricula	48	1,485	1,034	1,029	1,030

TABLE 26

NUMBER AND MEAN MONTHLY STARTING SALARIES OF ASSOCIATE DEGREE TECHNOLOGY GRADUATES BY CURRICULUM, 1976

CURRICULUM	No. of Schools	No. of Salaries	Mean Non-ECPD Schools*	Mean ECPD Schools*	Overall Mean
Aerospace	2	6			$633
Air Conditioning	11	75	$ 731	$936	772
Architectural	17	66	727	701	712
Automotive	12	74	761	775	763
Chemical	9	33	723	826	792
Civil	36	203	721	734	744
Computer	19	238	712	777	724
Construction	8	46	947	762	790
Drafting	29	227	710	751	713
Electrical	31	367	822	842	833
Electronics	53	647	753	804	770
Electromechanical	3	18		769	769
Environmental	6	19	1,019	766	913
Industrial	19	177	905	828	876
Mechanical	40	217	819	812	815
Other	32	245	777	818	785
All Curricula	102	2,658	768	798	779
Certificate Programs	4	318			719

* ECPD schools are those having at least one engineering technology curriculum accredited by the Engineers Council for Professional Development (ECPD). Specific curricula for these schools may or may not be accredited.

SOURCE: Middle Atlantic Career Counseling Association

TABLE 27

STARTING SALARY OFFERS TO GRADUATES OF TWO-YEAR COLLEGES BY CURRICULUM, 1975-1976

By Curriculum for all Types of Employers	No. Offers 1975-76 Total	Average Weekly Offers 1975-76 Total	Average Weekly Offers 1974-75 Total	1975-76 Aver. Weekly Salary Annualized
Business				
Accounting	136	$148	$148	$7,696
Business, General	77	152	156	7,904
Marketing	58	146	164	7,592
Secretarial Science	320	139	134	7,228
Other	20	163	152	8,476
Social Science				
Child Care	18	102	129	5,304
Police Science	20	192	196	9,984
Social Science	16	134	133	6,968
Other	5	166	131	8,632
Health Profession				
Dental Technology	40	170	143	8,840
Inhalation Therapy	8	132	---	6,864
Medical Technology	40	146	136	7,592
Nursing	227	184	174	9,568
Occupational Therapy	24	138	---	7,176
Physical Therapy	10	140	---	7,280
Recreational Therapy	7	133	---	6,916
X-Ray Technology	4	200	173	10,400
Other	10	151	159	7,852
Technology				
Agricultural	58	147	128	7,644
Animal Science Technician	10	123	---	6,396
Biology	13	157	150	8,164
Chemistry	48	180	177	9,360
Civil Engineering	11	160	185	8,320
Computer Science and Data Processing	81	168	161	8,736
Drafting	16	156	157	8,112
Electrical and Electronics	63	188	165	9,776
Environmental Science	39	140	160	7,280
Foods	38	163	---	8,476
Mechanical	65	156	175	8,112
Mechanical Design	11	168	146	8,736
Other	23	182	180	9,464
Liberal Arts				
Commercial Art	12	131	128	6,812
General Degree	19	135	---	7,020
Other	19	141	---	7,332
Total	1,566			

SOURCE: Middle Atlantic Career Counseling Association

TABLE 28

STARTING SALARY OFFERS TO GRADUATES OF TWO-YEAR COLLEGES BY TYPE OF EMPLOYER, 1975-76

TYPE OF EMPLOYER	No. Offers 1975-76 Total	Average Weekly Offers 1975-76 Total	Average Weekly Offers 1974-75 Total	1975-76 Aver. Weekly Salary Annualized
Accounting	24	146	139	7,592
Aerospace and Components	6	187	142	9,724
Automotive & Mechanical Equipment	54	151	150	7,852
Banking, Finance, Insurance	108	141	148	7,332
Buildings Materials Mfg. and Construction	34	162	168	8,424
Chemicals, Drugs and Allied Products	92	172	161	8,944
Dentists	40	170	---	8,840
Electrical Machinery and Equipment	47	168	163	8,736
Electronics and Instruments	62	176	173	9,152
Food & Beverage Processing	67	155	152	8,060
Glass, Paper, Packaging and Allied Products	16	179	152	9,308
Hotel/Resturant	12	146	---	7,592
Hospitals	350	168	172	8,736
Lawyers	58	143	---	7,436
Merchandising and Retail Services	132	135	151	7,020
Metals and Metal Products	23	169	163	8,788
Nursing Homes	12	163	---	8,476
Petroleum and Allied Products	19	156	171	8,112
Physicians	36	141	---	7,332
Research and/or Consulting Organizations	40	162	182	8,424
Textile Industry	15	155	---	8,060
Utilities - Public (Including Transportation)	37	176	161	9,152
Government - Federal	17	164	180	8,528
Government - Local and State	69	158	154	8,216
Non-Profit Organizations and Educational Institutions	68	130	130	6,760
Other	128	145	152	7,540
Total	1,566			

SOURCE: Institute of Food Technologists, Food Technology, January 1977.

TABLE 29

NUMBER AND MEDIAN MONTHLY STARTING SALARIES FOR 1976 GRADUATES IN FOOD SCIENCE AND TECHNOLOGY BY DEGREE LEVEL AND EMPLOYMENT AREA

EMPLOYMENT AREA	DEGREE LEVEL		
	B.S.	M.S.	PH.D.
Overall	(93) $ 940	(45) $1,126	(26) $1,450
Men	(58) 950	(30) 1,137	(20) 1,425
Women	(35) 925	(15) 1,000	(6) 1,480
Industry	(84) 950	(30) 1,091	(14) 1,500
Government	(2) 1,370	(6) 1,162	(2) 1,610
Education	(2) 736	(5) 1,000	(9) 1,166
Research Institute	(5) 800	(3) 1,025	(1) 1,458

SALARIES OF EXPERIENCED SCIENTIFIC AND TECHNICAL PERSONNEL

Three subsystems make up the *Manpower Characteristics System (MCS)* of the *National Science Foundation*. This system produces estimates for the total U.S. science and engineering population. The National Sample of almost 1.1 million scientists and engineers, limited to persons who were in the labor force by 1970, is surveyed by the *Bureau of the Census* for the NSF, and forms one part of the MCS. The other two subsystems include input of new doctoral scientists and engineers since 1970 from data collected and analyzed by the *National Academy of Sciences/National Research Council* and other scientists and engineers below the doctorate who have graduated in science and engineering since 1970.

- The median annual salary for all scientists and engineers in the National Sample in 1974 was $19,300. Atmospheric scientists and economists reported the highest, $22,300, and agricultural scientists the lowest, $17,100. Chemists, computer specialists, biological scientists, agricultural scientists, sociologists/anthropologists, and other social scientists all reported median salaries below the overall median (Table 28).

There were 53,900 (5.0%) women scientists and engineers in the National Sample in 1974. These women had considerably lower median annual salaries than did their male counterparts. Women earth scientists had the highest median salary and women biologists the lowest (Table 30).

Annual salaries in 1974 by field and degree level for scientists and engineers in the National Sample are shown in Table 31.

Business and industry employed 56% of the scientists and engineers in the National Sample in 1974, as well as the highest proportion of physical scientists, computer specialists, engineers, and environmental scientists. With the exception of computer specialists, these fields were predominantly male - over 90%. Educational institutions employed the highest proportion of mathematical scientists, life scientists, psychologists, and social scientists - all of whom have a higher proportion of women. Business and industry paid a median annual salary slightly less than the overall median. The federal government paid the highest median salaries of all types of employers, with medical scientists reporting the highest of any field, $25,000 (Table 32).

Nearly three fifths of the National Sample were engaged in either research and development or in management or administration. Scientists and engineers engaged in management or administration as their primary work activity earned the highest annual salaries, except for economists who were engaged in consulting (Table 33).

- There were approximately 265,500 doctoral scientists and engineers in the labor force in 1975, according to data collected by the *National Academy of Sciences/National Research Council* for the *Manpower Characteristics System* of the *National Science Foundation*. In *DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATE - 1975 PROFILE*, NRC reports a median annual salary for all doctoral scientists and engineers of $23,100, up 11% since 1973. Women Ph.D.'s earned substantially less than their male counterparts - $19,000 versus $23,000, and the discrepancy between the salaries of males and females tended to increase with age resulting in a difference of between $6,000 and $7,000 for older cohorts (Table 34). Further, the salary gap between median salaries of men and women increased from 17% in 1973 to 19% in 1975.

- Further analysis of the NRC data in *CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES, 1975* shows that the federal government and private industry continued to provide the highest salaries - $26,000 - about 13% greater than the overall median of $23,100 per year. Salaries paid by state and local governments

were about 10% lower than the median level, and salaries paid to individuals employed by two-year colleges were lowest of all, approximately 17% below the overall median. The highest median salary of $33,000 was reported by economists working in nonprofit organizations (Table 35). Detailed data on salaries of doctoral scientists and engineers employed in education, business and industry and the federal government are shown in Tables 36-38.

Teaching, the dominant work activity of doctoral scientists and engineers, continued to provide the lowest annual salaries. In 1975, the median annual salary of Ph.D's who reported teaching as their primary work activity was $20,600 - $2,500 per year below the overall median. Highest salaries were reported by managers, while those individuals engaged primarily in management or administration of research and development reported higher salaries then their peers in other activities. Again, economists engaged in management or administration earned the highest median salary - $36,400 (Table 39).

By geographic area, those scientists and engineers working in the Middle Atlantic region earned the highest salaries, with economists working in the Middle Atlantic reported the highest median salary (Table 40).

Median annual salaries by years of professional experience and by age for doctoral scientists and engineers in 1975 are presented in Tables 41 and 42.

In 1975, members of racial minority groups accounted for about 6% of the doctoral scientific and engineering population in the U. S. Asians were approximately four fifths of the racial minorities in 1975, the same proportion as in 1973. Black engineers reported the highest median salaries ($25,100), followed by black chemists (Table 43). White doctoral scientists and engineers earned higher median salaries than any minority group.

The *1976 NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES*, conducted by the *Columbus Laboratories of the Battelle Memorial Institute* for the *Energy Research and Development Administration*, presents salary data from 7,617 establishments covering 72,735 scientists and engineers spending more than 50% of their time in research and development activities.

For bachelor's degree nonsupervisory scientists and engineers, by working-as-occupation, aeronautical and astronautical engineers reported the highest mean monthly salary, $1,930; followed by by physicists at $1,860. Agricultural and biological scientists had the lowest mean monthly salary, $1,292 (Table 44). For master's degree nonsupervisory scientists and engineers, aeronautical and astronautical engineers again had the highest monthly salary of $2,030 and physicists were second at $2,005. Agricultural and biological scientists again earned the lowest monthly salaries of $1,565 (Table 45). At the doctorate level, chemical engineers reported the highest mean monthly salary of $2,369 and agricultural and biological scientists the lowest at $1,907 (Table 46).

By type of establishment, bachelor's degree scientists and engineers earned the most at federal establishments, master's degree personnel at contract research centers and doctorates in industry (Table 47).

By highest degree held, physicists earned the highest salaries and life scientists the lowest at all three degree levels (Table 48).

Women with comparable education and work experience earn substantially lower salaries than their male cohorts in all fields reported (Table 49).

• Salaries have continued to climb, and in many instances substantially, concludes a survey by *INDUSTRIAL RESEARCH* of salaries paid scientists and engineers employed in research and development. Thirteen percent of respondents to the survey reported salaries in the "over $31,000" category, with an average salary increase from 1976 of slightly over 9% (Chart 6).

Salary gains for the individual professions averaged over $2,000 above 1976, with mathematicians receiving the smallest increase (probably because they made the highest gain last year). Highest average income continues to go to aeronautical engineers, who averaged some $5,000 per year more than the industrial engineers, still in the bottom rank for the third straight year. Biologists, who had been the lowest, then next to the lowest, edged out chemists and moved into the third rank from the bottom in 1977 (Chart 4).

Increase in salary with years of experience is shown in Chart 5.

The average salary for R & D scientists and engineers without a bachelor's degree has increased more than $1,500 since 1976. The spread in the educational level in 1977 shows the scientist/engineer with an MS degree averaging $1,617 per year more than the person with a BS; and the Ph.D. averaging $2,253 more than the average MS (Chart 7).

• Average salaries for selected white-collar occupations in private industry rose 6.9% in the year ended March 1977, according to preliminary data from the annual survey by the *U. S. Department of Labor*. The increase is the third largest recorded in the 17-year history of the survey. For clerical jobs, increases averaged 6.6%, while professional, administrative and technical occupations rose 7.1% (Table 50). For comparison, Table 51 presents similar data for the March 1976 period.

• The 1977 study of salaries of experienced chemists and chemical engineers, conducted annually by the *American Chemical Society*, shows that the overall median annual salary of chemists increased 6% between March 1976 and March 1977. For B.S. chemists, the median salary is $21,000, up 6%; for master's, $22,000, up 7%; and for Ph.D.'s, $26,000, up 5%. Median salaries for chemical engineers increased 7% overall, with bachelor's degree engineers up 8% to $28,000; master's degrees up 11% to $30,000; and Ph.D.'s up only 3% to $30,000 (Table 52).

By and large, industry continues to pay more than other employers of chemists. The median salary for Ph.D.'s in manufacturing industry is $29,500 and for B.S. chemists, $22,000. Government is not far behind, however, paying a median of $28,000 for Ph.D. chemists and $21,000 for B.S.'s. However, the highest of all salaries reported were from the relative handful of self-employed chemists, with the median for B.S. and M.S.'s at $26,000 and for Ph.D.'s, $30,000. On the low end of the salary scale are those chemists who work in educational organizations (Table 53). Table 55 presents comparison data for 1976.

The best paying job for a chemist is in management or administration. For Ph.D.'s in such activities, the median salary is $35,000 a year; for M.S.'s $29,000 and for B.S.'s, $27,000 (Table 54). Table 56 presents 1976 data for comparison.

Inorganic chemists earn the highest salaries at the B.S. level; polymer chemists at the master's and Ph.D. levels (Table 57). 1976 comparative data are shown in Table 59.

B.S. chemists working in the Middle Atlantic region earned the highest salaries - $22,500, followed by those working in the West South Central and South

Atlantic at $22,000. M.S. and Ph.D. chemists also earn most in the Middle Atlantic area - $23,000 and $27,000 respectively (Table 58). Table 60 presents comparative data for 1976.

A comparison of salaries of chemists working in industry with all chemists finds that industrial chemists earn more at all degree levels and at all years of experience (Table 61). Table 63 presents comparable data for 1976.

The salaries of women chemists continue to be lower than men, no matter where they work (Table 53), what they do (Table 54), what specialty they chose (Table 57), their degree level or years of experience (Table 62). Part of the average differential results from men being generally older, tending to work more in industry and less in academic institutions, and importantly having management or administrative positions. However, the salary difference between men and women does not disappear when these factors are filtered out.

Table 65 presents 1977 median salary and 1976 income of chemists, while Table 67 presents similar data for 1976 median salary and 1975 income. Tables 66 and 68 show salaries and income for chemical engineers.

- A first attempt at a census of biologists by the *American Institute of Biological Sciences* showed great diversity in "disciplinary specialty" of respondents; wide variation in age, specialty and degree level among the 43 of 2,069 respondents who indicated that they were unemployed and seeking employment; and a wide variation in salaries among those who were employed. By type of employer, those biologists working in the federal government earn the most money (Table 69).

Women biologists earn less than their male cohorts at all degree levels. Among the respondents to the AIBS survey, women bachelor's biologists in the 20-29 age group earned $1,000 less than the men, but the same at the master's level, and $1,700 more at the Ph.D. level. However, as the age of the respondents rise, the salary differential widens (Table 70).

- The 19th annual survey by *INFOSYSTEMS* of data processing salaries shows a leveling off of wages in data processing. The net gain for all 28 positions included in the 1977 survey was just 3.6% compared to a 6.8% increase in 1976. The survey results are based on returns from 2,015 computer sites and cover 23,047 employees as of March 1, 1977.

By type of job, junior computer systems analysts experienced the highest increase from 1976 in average salary - a 12% gain to $309 per week, while managers/supervisors of computer operations had a 3.9% decrease in average weekly earnings (Table 71).

Data processing personnel earn more working in the New England area than in other geographic regions (Table 72).

- Average annual salaries for selected positions in state and territorial public health laboratories are collected by the *U. S. Department of HEW, Public Health Service*. As in previous years, Alaska leads all states in salaries paid to all positions studied in 1975 (Table 73).

Average salaries in 1975 range from $6,145 for lab aide I to $25,139 for lab directors. Medium level microbiologists averaged $14,260 while medium level chemists earned $14,395 (Table 74).

SOURCE: National Science Foundation, Characteristics of the National Sample of Scientists and Engineers, 1974, Part 2: Employment, NSF 76-323

TABLE 30

MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS BY FIELD AND SEX, 1974

F I E L D	TOTAL	MALE	FEMALE
PHYSICAL SCIENTISTS	$19,500	$20,000	$15,000
Chemists	18,900	19,400	14,400
Physicists/Astronomers	21,300	21,700	*
Other Physical Scientists	21,700	21,100	*
MATHEMATICAL SCIENTISTS	19,800	20,100	15,600
Mathematicians	19,700	20,000	15,400
Statisticians	20,000	20,100	16,100
COMPUTER SPECIALISTS	18,400	18,600	16,300
ENVIRONMENTAL SCIENTISTS	20,100	20,100	14,400
Earth Scientists	19,700	19,700	20,700
Oceanographers	14,300	20,800	*
Atmospheric Scientists	22,300	22,300	*
ENGINEERS	19,400	19,500	15,600
LIFE SCIENTISTS	17,800	18,100	13,500
Biological Scientists	17,900	18,500	13,500
Agricultural Scientists	17,100	17,200	*
Medical Scientists	19,700	21,000	15,200
PSYCHOLOGISTS	19,400	19,900	17,200
SOCIAL SCIENTISTS	20,200	20,900	16,100
Economists	22,300	22,800	17,300
Sociologists/Anthropologists	19,000	19,700	16,800
Other Social Scientists	18,600	19,400	13,900
TOTAL ALL FIELDS	19,300	19,400	15,700

* Less than 20 sample cases reported.

SOURCE: National Science Foundation, Characteristics of the National Sample of Scientists and Engineers 1974, Part 2: Employment, NSF 76-323

TABLE 31

MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS BY FIELD AND DEGREE LEVEL, 1974

FIELD	DEGREE LEVEL		
	Bachelor's	Master's	Doctorates
PHYSICAL SCIENTISTS	$17,100	$19,000	$21,800
Chemists	16,500	17,900	21,500
Physicists/Astronomers	19,400	21,100	22,100
Other Physical Scientists	20,200	20,500	22,800
MATHEMATICAL SCIENTISTS	19,400	18,100	21,200
Mathematicians	20,400	17,500	20,800
Statisticians	17,100	19,700	23,400
COMPUTER SPECIALISTS	18,000	19,000	22,200
ENVIRONMENTAL SCIENTISTS	19,100	19,600	22,000
Earth Scientists	18,700	19,300	21,700
Oceanographers	*	19,600	21,500
Atmospheric Scientists	21,900	21,100	26,900
ENGINEERS	19,100	20,100	23,200
LIFE SCIENTISTS	15,800	15,500	20,300
Biological Scientists	14,600	14,400	19,900
Agricultural Scientists	16,300	16,600	20,600
Medical Scientists	14,000	16,900	21,000
PSYCHOLOGISTS	15,800	17,100	21,100
SOCIAL SCIENTISTS	17,800	17,900	22,300
Economists	19,900	20,800	24,200
Sociologists/Anthropologists	17,500	15,700	20,900
Other Social Scientists	16,100	16,900	22,000
TOTAL ALL FIELDS	18,800	19,400	21,900

* Less than 20 sample cases reported.

SOURCE: National Science Foundation, Characteristics of the National Sample of Scientists and Engineers 1974 Part 2: Employment, NSF 76-323.

TABLE 32

MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1974

FIELD	TYPE OF EMPLOYER										
	Business & Industry	4-year College/ University	2-year College	Other Ed. Inst.	Hospital/ Clinic	Non-Profit Organi-zation	Federal Govern-ment	State Govern-ment	Local Govern-ment	Other Govern-ment	Other
Physical Scientists	$19,700	$18,700	$17,600	*	$18,300	$21,400	$21,700	$15,600	$18,200	$18,200	$19,500
Chemists	19,000	18,700	17,700	*	17,700	18,300	20,300	14,300	16,500	18,300	18,400
Physicist/ Astronomers	22,300	18,500	17,400	*	*	23,500	22,600	18,900	*	*	21,900
Other Physical Scientists	21,600	18,000	*	*	*	*	23,900	*	20,000	*	22,600
Mathematical Scientists	20,700	19,400	16,000	*	*	23,100	21,700	15,000	17,000	*	20,700
Mathematicians	21,800	19,200	16,000	*	*	23,900	20,900	*	16,800	*	20,200
Statisticians	20,200	20,200	*	*	*	*	23,200	14,200	17,400	*	21,800
Computer Specialists	18,200	17,000	*	*	*	17,800	20,900	15,700	18,300	19,500	19,300
Environmental Scientists	20,200	19,300	18,100	*	*	*	21,400	14,900	19,600	20,800	19,300
Earth Scientists	20,200	18,800	18,100	*	*	*	20,600	14,700	18,900	20,800	18,800
Oceanographers	*	21,400	*	*	*	*	22,100	*	*	*	*
Atmospheric Scientists	*	20,900	*	*	*	*	22,800	*	*	*	*
Engineers	19,000	20,800	18,500	19,700	*	20,700	22,300	17,400	19,400	19,300	19,700
Life Scientists	18,300	19,200	16,500	13,600	15,200	15,600	17,700	13,900	15,000	*	17,000
Biological Scientists	18,900	19,000	15,700	13,400	*	16,000	18,800	14,100	15,400	*	16,800
Agricultural Scientists	17,900	18,600	*	*	*	*	17,100	13,400	14,700	*	20,100
Medical Scientists	*	20,700	*	*	15,700	*	25,000	*	*	*	17,600
Psychologists	19,600	19,300	18,300	19,400	18,300	21,300	22,700	17,700	18,400	*	25,700
Social Scientists	24,300	20,100	18,200	19,700	16,400	17,500	24,600	14,100	17,900	25,500	20,800
Economists	24,500	21,100	*	*	*	23,400	24,600	16,700	21,400	*	23,700
Sociologists/ Anthropologists	*	19,400	*	*	*	*	*	*	*	*	*
Other Social Scientists	23,600	19,900	*	*	*	16,700	24,700	12,700	17,500	*	*
Total All Fields	19,000	19,400	17,400	19,000	17,500	20,100	21,700	16,400	18,900	19,400	19,600

* Less than 20 sample cases reported.

SOURCE: National Science Foundation, Characteristics of the National Sample of Scientists and Engineers, 1974, Part 2: Employment, NSF 76-323

TABLE 33

MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1974

FIELD	PRIMARY WORK ACTIVITY										
		RESEARCH & DEVELOPMENT				MANAGEMENT OR ADMINISTRATION					
	RESEARCH AND DEVELOPMENT	Basic Research	Applied Research	Development/ Design	MANAGEMENT OR ADMINISTRATION	Of R & D	Other Than R & D	TEACHING	PRODUCTION/ INSPECTION	CONSULTING	OTHER ACTIVITIES
PHYSICAL SCIENTISTS	$19,000	$18,800	$19,600	$18,500	$24,500	$25,600	$21,700	$19,000	$15,500	$20,000	$17,600
Chemists	18,200	18,000	19,000	17,700	23,800	25,000	21,000	19,200	15,200	20,600	16,900
Physicists/Astronomers	20,900	21,300	21,100	20,500	27,100	28,900	22,700	18,800	19,200	21,200	17,900
Other Physical Scientists	22,400	22,500	22,700	21,700	26,100	27,200	21,700	18,600	*	*	18,800
MATHEMATICAL SCIENTISTS	21,400	20,300	21,700	19,400	24,200	25,600	23,000	18,000	18,300	23,700	18,500
Mathematicians	21,300	22,100	22,000	19,300	24,100	25,700	22,700	17,800	16,800	23,900	19,200
Statisticians	21,800	*	*	*	24,600	25,500	23,600	19,900	*	*	18,000
COMPUTER SPECIALISTS	19,100	*	*	18,800	20,700	23,300	20,100	18,900	19,300	20,000	17,700
ENVIRONMENTAL SCIENTISTS	20,100	20,200	20,200	18,700	22,900	25,000	21,800	18,900	19,200	20,100	18,700
Earth Scientists	19,700	20,300	19,500	17,900	22,600	24,500	21,000	18,800	18,700	20,100	18,500
Oceanographers	19,600	*	*	*	*	*	*	*	*	*	*
Atmospheric Scientists	22,800	*	22,800	*	23,800	*	22,100	*	23,200	*	19,800
ENGINEERS	18,300	19,400	20,400	18,100	22,600	24,600	21,600	20,400	17,800	20,000	18,300
LIFE SCIENTISTS	17,900	17,700	18,000	18,200	19,000	22,400	17,700	18,500	15,900	16,000	15,200
Biological Scientists	17,300	16,800	17,700	18,700	21,300	22,500	19,500	18,200	14,900	14,700	14,400
Agricultural Scientists	18,000	18,600	18,100	16,800	17,800	21,100	17,100	18,200	16,500	16,400	15,100
Medical Scientists	18,800	18,900	18,800	*	24,300	25,000	20,700	20,100	*	15,700	*
PSYCHOLOGISTS	19,500	19,400	19,400	*	22,200	25,400	20,700	18,700	*	19,100	17,700
SOCIAL SCIENTISTS	20,200	18,900	21,100	*	23,100	24,900	21,200	19,800	20,800	17,700	17,900
Economists	22,000	20,700	22,700	*	25,400	28,100	24,500	20,800	*	32,200	20,900
Sociologists/ Anthropologists	18,400	18,500	*	*	21,100	17,900	21,900	18,900	*	*	16,100
Other Social Scientists	18,100	16,500	*	*	19,900	20,600	19,300	19,800	*	14,200	14,400
TOTAL, ALL FIELDS	18,400	18,900	19,800	18,100	22,600	24,700	21,200	19,200	17,600	19,600	18,000

* Less than 20 sample cases reported.

SOURCE: National Research Council, Doctoral Scientists and Engineers in the United States - 1975 Profile, 1976.

TABLE 34

NUMBER AND MEDIAN ANNUAL SALARY OF DOCTORAL SCIENTISTS AND ENGINEERS BY SEX AND AGE IN 1975

AGE IN 1975	TOTAL LABOR FORCE		MALE		FEMALE	
	Number	Salary	Number	Salary	Number	Salary
Total*	265,534	$23,126	242,346	$23,509	23,188	$19,035
Under 30	9,848	16,929	8,246	17,224	1,602	15,916
30 - 34	57,099	18,811	51,816	18,967	5,283	16,829
35 - 39	55,628	21,532	51,377	21,794	4,251	18,327
40 - 44	41,729	24,226	38,824	24,455	2,905	19,947
45 - 49	34,948	26,156	31,886	26,552	3,062	21,276
50 - 54	29,491	28,068	26,992	28,604	2,499	22,257
55 - 59	18,863	28,151	17,342	28,588	1,521	21,627
60 - 64	11,493	28,532	10,296	29,200	1,197	22,677
Over 64	6,156	27,713	5,357	28,478	799	22,374

*Includes those not reporting age.

Note: Medians were computed for full-time employed civilians only. Academic salaries were mutliplied by 11/9 to adjust to a full-year scale.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309.

TABLE 35

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1975

FIELD	TYPE OF EMPLOYER									
	TOTAL		EDUCATIONAL INSTITUTIONS							
		Business and Industry	Total	4-Year Colleges	2-Year Colleges	Elem./ Sec. School	Hospital/ Clinic	Non-Profit Organi- zation	Federal Government	State Government
ALL FIELDS	$23,100	$26,000	$21,400	$21,400	$19,200	$20,600	$21,800	$24,400	$26,200	$20,900
PHYSICAL SCIENTISTS	23,900	25,900	21,000	21,400	18,500	13,700	22,300	23,900	26,000	18,200
Chemists	24,000	25,900	20,500	20,700	18,800	14,000	21,300	23,600	26,300	17,800
Physicists/Astronomers	23,600	25,900	22,000	22,200	18,000	*	*	24,300	25,700	*
MATHEMATICAL SCIENTISTS	21,200	25,600	20,500	20,500	18,300	*	*	26,200	27,500	*
Mathematicians	20,900	26,100	20,300	20,400	18,200	*	*	26,800	26,000	*
Statisticians	23,100	24,400	22,200	22,200	*	*	*	*	30,200	*
COMPUTER SPECIALISTS	23,400	23,900	22,700	22,700	*	*	*	*	24,800	*
ENVIRONMENTAL SCIENTISTS	23,400	26,100	20,900	21,100	18,300	*	*	23,500	27,400	20,400
Earth Scientists	23,500	26,400	20,800	20,900	*	*	*	24,000	27,600	20,200
Oceanographers	22,100	*	19,700	20,000	*	*	*	*	28,500	*
Atmospheric Scientists	24,100	22,600	23,000	23,100	*	*	*	24,300	27,100	*
ENGINEERS	25,200	26,000	23,600	23,600	21,000	*	*	25,800	26,600	19,500
LIFE SCIENTISTS	22,200	25,500	20,900	21,000	18,000	17,600	24,000	22,800	25,400	20,600
Biological Scientists	21,300	24,900	20,300	20,400	17,800	18,000	21,900	20,900	25,200	20,400
Agricultural Scientists	22,000	23,200	20,800	20,800	*	*	*	*	24,900	19,100
Medical Scientists	25,700	29,900	24,100	24,100	*	*	26,300	25,600	28,900	26,300
PSYCHOLOGISTS	22,100	30,500	21,000	20,800	23,000	22,300	21,300	24,200	26,700	21,800
SOCIAL SCIENTISTS	22,100	28,300	21,200	21,200	20,900	*	*	25,200	28,900	22,300
Economists	24,600	30,800	22,800	22,800	*	*	*	33,000	27,700	*
Sociologists/ Anthropologists	20,700	*	20,500	20,600	*	*	*	18,700	*	*
Other Social Scientists	21,200	22,900	20,500	20,500	22,100	*	*	22,500	30,800	21,500
NO REPORT	25,900	*	*	*	*	*	*	*	*	*

NOTE: Median salaries computed only for full-time employed civilians.

* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 36

NUMBER AND SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN EDUCATIONAL INSTITUTIONS BY FIELD: 1973 AND 1975

Field	1973				1975			
	Number	Percent distribution	Percent of total employed	Median annual salary	Number	Percent distribution	Percent of total employed	Median annual salary
Total employed	132,692	100.0	58.5	19,300	15,3249	100 0	58 4	$21,400
Physical scientists	22,038	16.6	44.9	18,700	26,141	17.1	47.1	21,000
Chemists	11,870	8 9	38.5	18,360	14,402	9 4	39.8	20,560
Physicists/astronomers	10,165	7.7	55.6	19,100	11,739	7 7	61 0	22,000
Mathematical scientists	10,700	8.1	84.9	18,700	12,006	7.8	86 1	20,500
Mathematicians	9,596	7.2	86.4	18,600	10,655	7.0	87 7	20,300
Statisticians	1,104	8	73 8	19,800	1,351	.9	75.4	22,200
Computer specialists	1,506	1.1	51.7	21,700	1,765	1.2	48 3	22,700
Environmental scientists	5,314	4 0	50.4	18,900	6,170	4.0	49.6	20,900
Earth scientists	4,306	3.2	49.6	18,800	4,754	3.1	48 6	20,800
Oceanographers	693	.5	59.4	18,900	840	.5	63 6	19,700
Atmospheric scientists	315	.2	46.1	21,500	576	.4	43.0	23,000
Engineers	13,022	9.8	36.0	20,900	15,306	10.0	35.3	23,600
Life scientists	39,798	30.0	67.1	19,000	45,115	29.4	67.2	20,900
Biological scientists	26,933	20.3	71.9	18,800	29,632	19 3	74.0	20,300
Agricultural scientists	6,885	5.2	61 9	18,800	8,263	5.4	60.5	20,800
Medical scientists	5,980	4.5	55.4	21,500	7,220	4.7	53.6	24,100
Psychologists	15,956	12.0	61.3	19,300	17,828	11.6	58.8	21,000
Social scientists	24,260	18.3	81.2	19,600	28,858	18.8	80.2	21,200
Economists	6,283	4.7	71.9	20,900	7,204	4.7	70.0	22,800
Sociologists/anthropologists	6,187	4.7	91.2	19,400	7,586	5.0	92.7	20,500
Other social scientists	11,790	8.9	82.2	19,200	14,068	9.2	80.5	20,500
No report	101	.1	70.6	(1)	60	(2)	63 8	(1)

[1] No median computed for groups with fewer than 20 individuals reporting salary
[2] Less than 0 05 percent

NOTE Medians computed only for full-time employed civilians Percents may not add to 100 because of rounding
SOURCE National Science Foundation

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 37

NUMBERS AND SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN BUSINESS AND INDUSTRY BY FIELD: 1973 AND 1975

Field	1973				1975			
	Number	Percent distribution	Percent of total employed	Median annual salary	Number	Percent distribution	Percent of total employed	Median annual salary
Total employed	50,022	100 0	22.1	$23,400	65,876	100.0	25.1	$26,000
Physical scientists	19,213	38 4	39.1	23,000	22,385	34.0	40.4	25,900
Chemists	15,294	30.6	49.6	22,800	18,278	27 7	50.5	25,900
Physicists/astronomers	3,919	7 8	21.5	23,800	4,107	6.2	21.3	25,900
Mathematical scientists	850	1.7	6 7	24,200	1,066	1.6	7.6	25,600
Mathematicians	686	1 4	6 2	24,000	847	1.3	7.0	26,100
Statisticians	164	3	11 0	25,300	219	3	12.2	24,400
Computer specialists	1,050	2.1	36 0	22,700	1,474	2 2	40.3	23,900
Environmental scientists	2,030	4 1	19 3	23,100	2,978	4 5	23 9	26,100
Earth scientists	1,933	3.9	22.2	23,100	2,730	4 1	27.9	26,400
Oceanographers	74	.1	6.3	(2)	76	.1	5.8	(2)
Atmospheric scientists	23	(1)	3.8	(2)	172	.3	12.8	23,600
Engineers	17,348	34.7	47.9	23,500	22,535	34.2	52.0	26,000
Life scientists	6,821	13 6	11 5	23,500	9,129	13.9	13.6	25,500
Biological scientists	3,175	6 3	8.5	23,100	3,568	5 4	8.9	24,900
Agricultural scientists	1,828	3.7	16 4	22,300	2,687	4.1	19.7	23,200
Medical scientists	1,818	3.6	16.8	25,400	2,874	4.4	21.4	29,900
Psychologists	454	2.9	5.6	28,300	4,187	6.4	13.8	30,500
Social scientists	1,246	2 5	4.2	28,000	2,108	3.2	5.9	28,300
Economists	783	1.6	9.0	30,700	1,266	1.9	12.3	30,800
Sociologists/anthropologists	63	1	.9	(2)	97	.1	1.2	(2)
Other social scientists	400	.8	2.8	25,900	745	1.1	4.3	22,900
No report	10	(1)	7.0	(2)	14	(1)	14.9	(2)

[1] Less than 0 05 percent

[2] No median computed for groups with fewer than 20 individuals reporting salary

NOTE Medians computed only for full-time employed civilians, Percents may not add to 100 because of rounding

SOURCE National Science Foundation

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 38

NUMBERS AND SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN THE FEDERAL GOVERNMENT[1] BY FIELD: 1973 AND 1975

Field	1973				1975			
	Number	Percent distribution	Percent of total employed	Median annual salary	Number	Percent distribution	Percent of total employed	Median annual salary
Total employed	17,640	100.0	7 8	$23,700.	19,452	100.0	7.4	$26,200
Physical scientists	4,124	23.4	8.4	23,500	3,787	19.5	6.8	26,000
Chemists	1,635	9.3	5.3	23,800	1,697	8.7	4.7	26,300
Physicists/astronomers	2,489	14.1	13.6	23,300	2,090	10.7	10.9	25,700
Mathematical scientists	505	2.9	4.0	23,900	572	2.9	4.1	27,500
Mathematicians	383	2.2	3.4	23,800	381	2.0	3 1	26,000
Statisticians	122	.7	8.2	(2)	191	1 0	10.7	30,200
Computer specialists	120	.7	4.1	(2)	211	1.1	5.8	24,800
Environmental scientists	1,967	11.2	18.7	23,900	2,230	11.5	17.9	27,400
Earth scientists	1,542	8.7	17 7	24,100	1577	8.1	16.1	27,600
Oceanographers	174	1.0	14.9	23,000	239	1.2	18.1	28,500
Atmospheric scientists	251	1.4	36.7	23,800	414	2.1	30.9	27,100
Engineers	2,679	15 2	7.4	23,500	3,079	15.8	7.1	26,600
Life scientists	5,844	33.1	9.8	23,200	6,496	33.4	9.7	25,400
Biological scientists	3,315	18.8	8.9	22,900	3,535	18.2	8.8	25,200
Agricultural scientists	1,801	10 2	16.2	22,700	2,144	11.0	15.7	24,900
Medical scientists	728	4.1	6.7	26,500	817	4.2	6 1	28,900
Psychologists	960	5 4	3.7	24,800	979	5.0	3.2	26,700
Social scientists	1,441	8.2	4 8	27,300	2,098	10.8	5.8	28,900
Economists	650	3.7	7.4	26,800	965	5.0	9.4	27,700
Sociologists/anthropologists	79	.4	1.2	(2)	157	0.8	1.9	(2)
Other social scientists	712	4.0	5 0	27,900	976	5.0	5.6	30,800

[1] Civilian employees only

[2] No median computed for groups with fewer than 20 individuals reporting salary

NOTE: Medians computed only for full-time employed. Percents may not add to 100 because of rounding.

SOURCE: National Science Foundation

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 39

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1975

FIELD	Total	Research & Development				Management or Administration				Teaching	Consulting	Sales Prof. Serv.	Other	No Report
		Total	Basic Res.	Applied Res.	Development	Total	Of R&D	Other than R&D	Of Both					
ALL FIELDS	$23,100	$23,000	$22,200	$23,300	$23,600	$29,500	$30,100	$27,800	$30,200	$20,600	$25,400	$21,900	$22,100	$23,700
Physical Scientists	23,900	23,600	23,200	24,100	23,300	30,200	30,400	28,900	29,900	20,300	27,600	24,000	22,100	25,100
Chemists	24,000	23,500	23,600	23,500	22,900	30,100	30,200	29,100	28,800	19,900	28,200	24,900	22,000	26,300
Physicists & Astronomers	23,600	24,000	22,600	25,000	24,200	31,100	32,000	27,900	32,000	20,900	*	*	22,600	23,100
Mathematical Scientists	21,200	22,700	21,200	24,900	21,300	29,000	31,200	27,300	25,400	19,900	25,600	*	*	20,900
Mathematicians	20,900	22,500	20,900	25,200	21,400	28,300	32,300	26,400	24,500	19,800	*	*	*	22,600
Statisticians	23,100	23,500	22,600	24,200	*	29,300	*	*	*	21,000	*	*	*	*
Computer Specialists	23,400	22,900	23,900	23,100	22,500	30,000	30,800	28,000	26,300	22,000	*	*	*	*
Environmental Scientists	23,400	23,200	22,800	23,900	23,400	29,200	29,400	28,200	32,000	20,200	24,300	*	21,500	23,500
Earth Scientists	23,500	23,700	23,200	24,100	*	29,200	29,400	28,300	32,200	20,200	25,000	*	21,700	23,100
Oceanographers	22,100	20,700	20,300	*	*	28,600	27,900	*	*	19,000	*	*	*	*
Atmospheric Scientists	24,100	23,400	23,800	23,000	*	30,200	30,900	*	*	21,800	*	*	*	*
Engineers	25,200	23,800	23,100	23,800	23,900	30,400	30,300	29,800	32,500	22,900	25,500	23,100	23,600	25,900
Life Scientists	22,200	21,600	21,500	21,700	22,000	29,300	30,000	27,200	30,000	20,300	21,400	24,500	20,200	23,100
Biological Scientists	21,300	21,500	21,300	22,000	22,000	27,600	28,600	25,400	27,500	19,700	20,700	24,100	20,600	20,800
Agricultural Scientists	22,000	21,200	21,500	21,100	21,700	29,100	29,000	27,700	30,100	20,500	22,600	18,300	19,300	23,900
Medical Scientists	25,700	22,900	22,100	24,900	22,900	31,600	32,800	29,400	30,800	23,600	*	34,900	21,500	26,500
Psychologists	22,100	22,400	21,900	22,700	24,500	25,600	26,700	25,200	26,200	20,200	23,900	21,300	21,800	23,400
Social Scientists	22,100	22,900	22,100	24,100	*	29,800	28,100	29,800	32,000	20,400	30,400	21,300	23,700	22,200
Economists	24,600	25,000	26,600	24,700	*	32,700	31,300	34,000	36,400	21,900	33,600	*	30,400	25,100
Sociologists/ Anthropologists	20,700	22,100	22,100	22,300	*	26,200	25,600	25,900	*	19,800	*	*	*	20,600
Other Social Scientists	21,200	21,200	20,300	22,600	*	28,000	27,300	27,700	31,000	19,700	26,400	19,500	21,700	21,800
No Report	25,900	*	*	*	*	*	*	*	*	*	*	*	*	*

NOTE: All median salaries were computed only for full-time employed civilians.
* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 40

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND GEOGRAPHIC AREA, 1975

FIELD	GEOGRAPHIC AREA									
	Total	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
ALL FIELDS	$23,100	$22,600	$24,600	$22,600	$21,500	$24,100	$20,900	$22,600	$21,900	$23,500
PHYSICAL SCIENTISTS	23,900	23,600	24,900	23,500	22,000	24,500	21,300	23,200	23,500	23,700
Chemists	24,000	23,200	25,000	24,100	22,100	24,500	21,500	24,100	21,400	23,400
Physicists/Astronomers	23,600	24,100	24,500	21,900	18,700	24,400	21,000	20,800	24,700	24,000
MATHEMATICAL SCIENTISTS	21,200	21,400	23,400	20,800	18,700	22,300	19,400	19,900	20,800	22,000
Mathematicians	20,900	21,000	23,300	20,500	18,700	21,600	18,900	19,900	21,000	21,500
Statisticians	23,100	*	23,900	22,300	19,100	25,200	*	*	*	24,900
COMPUTER SPECIALISTS	23,400	22,300	24,600	22,300	23,100	24,000	*	22,100	25,400	23,400
ENVIRONMENTAL SCIENTISTS	23,400	21,600	24,400	21,700	22,700	24,500	22,000	24,600	22,500	23,600
Earth Scientists	23,500	22,500	24,300	21,500	22,000	24,800	24,200	24,800	22,000	24,500
Oceanographers	22,100	19,600	22,800	*	*	24,600	*	*	*	21,500
Atmospheric Scientists	24,100	*	*	*	*	23,400	*	*	23,900	23,500
ENGINEERS	25,200	25,000	26,400	23,700	23,900	25,600	24,000	25,200	24,100	25,800
LIFE SCIENTISTS	22,200	21,400	23,800	22,600	21,100	23,200	20,500	21,200	20,400	22,400
Biological Scientists	21,300	20,700	22,400	21,600	20,500	22,200	19,300	20,200	19,800	21,700
Agricultural Scientists	22,000	21,000	24,500	22,500	21,000	23,100	20,900	21,400	21,000	22,500
Medical Scientists	25,700	24,900	27,700	26,100	24,300	27,100	22,600	24,500	21,400	26,200
PSYCHOLOGISTS	22,100	20,600	23,700	21,200	21,200	22,400	20,000	21,100	20,700	22,700
SOCIAL SCIENTISTS	22,100	21,600	23,400	21,500	20,700	24,300	19,400	20,600	19,800	22,000
Economists	24,600	23,100	28,100	23,600	24,200	26,800	20,800	23,500	20,600	24,400
Sociologists/ Anthropologists	20,700	20,500	22,200	20,400	19,300	21,500	21,000	18,900	20,200	19,800
Other Social Scientists	21,200	21,000	22,600	20,600	19,700	22,900	18,800	19,900	19,000	21,500
NO REPORT	25,900	*	*	*	*	*	*	*	*	*

NOTE: All median salaries were computed only for full-time employed civilians.

* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Enigneers in the United States, 1975, NSF 77-309

TABLE 41

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE, 1975

FIELD	Total	YEARS OF PROFESSIONAL EXPERIENCE										
		1 or less	2-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 or more	No Report
ALL FIELDS	$23,100	$16,200	$17,400	$19,800	$22,900	$25,000	$27,500	$29,100	$29,200	$30,200	$29,400	$22,800
Physical Scientists	23,900	17,700	18,000	20,300	23,400	25,600	29,100	29,000	29,800	30,300	27,700	23,800
Chemists	24,000	17,900	17,900	20,600	23,400	25,400	28,800	28,800	29,500	30,000	25,900	24,200
Physicists & Astronomers	23,600	*	18,100	19,900	23,300	26,000	29,600	29,600	30,700	30,800	30,100	22,000
Mathematical Scientists	21,200	13,200	16,100	18,700	20,700	24,200	26,200	29,700	28,500	31,500	28,700	20,600
Mathematicians	20,900	12,800	16,000	18,500	20,600	23,800	25,800	29,700	28,200	30,500	28,100	20,100
Statisticians	23,100	*	16,400	20,400	21,500	27,100	29,500	29,500	31,000	*	*	*
Computer Scientists	23,400	*	17,400	21,500	23,400	26,700	30,100	33,600	*	*	*	*
Environmental Scienitsts	23,400	*	17,100	20,000	22,400	25,000	27,800	29,100	28,200	30,900	30,800	*
Earth Scientists	23,500	*	17,500	19,900	22,100	25,000	27,300	28,700	27,900	30,500	30,700	*
Oceanographers	22,100	*	*	18,900	22,600	24,500	*	*	*	*	*	*
Atmospheric Scientists	24,100	*	*	22,200	22,900	*	*	*	*	*	*	*
Engineers	25,200	18,900	19,700	22,900	24,800	26,800	28,900	31,400	31,300	31,400	30,900	25,300
Life Scientists	22,200	15,400	16,900	18,900	22,000	24,200	26,200	27,900	27,700	29,200	29,300	23,300
Biological Scientists	21,300	15,300	16,400	18,400	21,400	23,800	26,000	27,200	26,900	29,500	28,400	22,600
Agricultural Scientists	22,000	*	17,000	18,800	21,800	23,000	24,900	26,300	25,900	26,600	27,800	*
Medical Scientists	25,700	16,500	18,600	22,000	25,500	28,300	30,100	31,500	33,200	33,000	35,200	24,600
Psychologists	22,100	15,400	16,700	19,000	22,400	23,900	26,900	26,500	27,100	28,000	27,700	20,500
Social Scientists	22,100	*	16,500	18,700	22,000	24,000	26,200	28,800	28,900	30,100	30,200	20,300
Economists	24,600	*	18,300	20,900	23,900	26,300	28,200	30,600	30,500	32,000	31,000	*
Sociologists/ Anthropologists	20,700	*	16,300	18,000	20,700	23,600	25,300	26,600	27,400	30,800	*	*
Other Social Scientists	21,200	*	15,900	18,200	21,200	23,000	25,900	27,800	28,800	29,200	29,600	20,400
No Report	25,900	*	*	*	*	*	*	*	*	*	*	*

NOTE: All median salaries were computed only for full-time employed civilians.
* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 42

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND AGE, 1975

FIELD	AGE											
	Total	24 & Under	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 & Over
ALL FIELDS	$23,100	*	$16,900	$18,800	$21,500	$24,200	$26,200	$28,100	$28,200	$28,500	$28,000	$22,900
Physical Scientists	23,900	*	18,000	19,300	22,100	25,200	27,300	28,800	29,300	29,400	25,800	*
Chemists	24,000	*	18,200	19,200	22,300	25,100	27,300	28,200	28,500	29,400	25,100	*
Physicists & Astronomers	23,600	*	17,400	19,300	21,700	25,400	27,200	30,800	30,800	29,300	27,200	*
Mathematical Scientists	21,200	*	15,400	18,100	20,300	23,100	26,300	28,900	27,900	28,800	29,800	*
Mathematicians	20,900	*	15,400	18,000	20,100	22,900	25,700	28,600	27,600	28,200	30,000	*
Statisticians	23,100	*	*	18,600	22,100	24,700	28,300	30,200	29,200	*	*	*
Computer Specialists	23,400	*	17,500	20,600	23,200	25,200	33,700	29,000	*	*	*	*
Environmental Scientists	23,400	*	17,000	18,500	21,600	23,900	26,300	27,800	29,300	27,800	30,600	*
Earth Scientists	23,500	*	16,300	18,700	21,300	23,300	26,500	27,600	28,600	27,400	30,500	*
Oceanographers	22,100	*	*	17,300	20,100	23,700	26,600	*	*	*	*	*
Atmospheric Scientists	24,100	*	*	18,700	23,000	27,600	*	27,800	*	*	*	*
Engineers	25,200	*	20,100	21,700	24,500	25,900	29,000	30,700	30,800	31,500	29,900	*
Life Scientists	22,200	*	15,900	17,800	20,200	23,100	25,100	26,800	26,700	27,800	28,500	26,100
Biological Scientists	21,300	*	15,400	17,400	19,700	22,300	25,000	26,000	26,400	27,400	28,000	*
Agricultural Scientists	22,000	*	*	17,800	20,200	22,400	24,000	25,700	25,400	25,500	27,700	*
Medical Scientists	25,700	*	17,100	19,600	22,800	26,800	30,000	30,200	31,300	34,500	32,300	*
Psychologists	22,100	*	16,000	18,100	20,700	23,200	25,400	26,000	26,700	25,800	25,600	*
Social Scientists	22,100	*	16,600	18,000	19,800	22,500	24,400	26,700	27,200	28,400	30,100	*
Economists	24,600	*	18,400	20,500	22,600	25,000	25,700	29,700	30,300	29,700	*	*
Sociologists/ Anthropologists	20,700	*	16,100	17,300	18,600	21,200	23,500	24,600	26,600	28,000	*	*
Other Social Scientists	21,200	*	16,100	17,200	18,900	22,000	24,400	26,600	25,600	27,100	30,100	*
No Report	25,900	*	*	*	*	*	*	*	*	*	*	*

NOTE: All median salaries were computed only for full-time employed civilians.
* No Median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309

TABLE 43

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX, AND RACE, 1975

FIELD	TOTAL	SEX		RACE					
		Men	Women	White/ Caucasian	Black/ Negro	American Indian	Asian	Other	No Report
ALL FIELDS	$23,100	$23,500	$19,000	$23,200	$22,800	$20,800	$21,500	$20,600	$23,100
PHYSICAL SCIENTISTS	23,900	24,100	19,100	24,100	22,900	*	20,800	*	23,400
Chemists	24,000	24,200	19,000	24,200	23,800	*	21,300	*	23,000
Physicists/Astronomers	23,600	23,700	19,300	23,900	*	*	20,400	*	23,900
MATHEMATICAL SCIENTISTS	21,200	21,400	18,300	21,200	21,700	*	20,300	*	21,900
Mathematicians	20,900	21,100	18,100	20,900	21,600	*	20,800	*	21,100
Statisticians	23,100	23,200	22,100	23,300	*	*	*	*	*
COMPUTER SPECIALISTS	23,400	23,600	18,000	23,500	*	*	19,200	*	26,000
ENVIRONMENTAL SCIENTISTS	23,400	23,500	19,000	23,300	*	*	22,500	*	24,500
Earth Scientists	23,500	23,600	18,200	23,500	*	*	22,100	*	24,400
Oceanographers	22,100	22,200	*	22,000	*	*	*	*	*
Atmospheric Scientists	24,100	24,200	*	23,900	*	*	*	*	*
ENGINEERS	25,200	25,200	20,800	25,500	25,100	*	22,300	*	24,200
LIFE SCIENTISTS	22,200	22,600	18,900	22,300	22,100	*	20,700	*	22,600
Biological Scientists	21,300	21,800	18,400	21,300	21,600	*	20,400	*	20,700
Agricultural Scientists	22,000	22,000	20,000	22,000	*	*	18,000	*	23,600
Medical Scientists	25,700	26,300	20,600	25,900	22,900	*	23,400	*	25,900
PSYCHOLOGISTS	22,100	22,700	19,600	22,000	23,400	*	21,700	*	22,700
SOCIAL SCIENTISTS	22,100	22,500	18,700	22,100	22,100	*	20,800	*	23,200
Economists	24,600	24,700	21,400	24,500	*	*	23,300	*	26,100
Sociologists/ Anthropologists	20,700	21,600	18,500	20,800	23,300	*	18,500	*	21,100
Other Social Scientists	21,200	21,600	18,200	21,100	21,800	*	20,700	*	22,000
NO REPORT	25,900	*	*	*	*	*	*	*	*

NOTE: All median salaries were computed only for full-time employed civilians.

* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1976

TABLE 44

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1976

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Aeronautical and Astronautical Engineering	(70) $1,198	(76) $1,353	(63) $1,561	(100) $1,812	(121) $1,992	(124) $2,083	(146) $2,171	(143) $2,172	(21) $2,091	(2,618) $1,930
Chemical Engineering	(64) 1,325	(65) 1,415	(43) 1,540	(29) 1,671	(31) 1,838	(34) 1,967	(53) 2,048	(97) 2,065	(121) 2,287	(1,289) 1,794
Electrical and Electronic Engineering	(509) 1,211	(524) 1,357	(490) 1,551	(344) 1,741	(295) 1,875	(309) 1,969	(415) 2,072	(515) 2,147	(40) 2,189	(9,934) 1,742
Industrial Engineering	(11) 1,388	(9) 1,380	(7) 1,546	(3) 1,491	(5) 1,795	(4) 1,725	(5) 2,115	(12) 2,031	(1) 1,775	(167) 1,672
Materials Engineering	(15) 1,201	(13) 1,290	(12) 1,533	(8) 1,668	(10) 1,695	(5) 1,835	(18) 2,112	(24) 1,918	(3) 2,241	(350) 1,779
Mechanical Engineering	(132) 1,235	(118) 1,355	(94) 1,543	(84) 1,707	(56) 1,816	(71) 1,922	(96) 2,057	(182) 2,026	(26) 2,034	(2,474) 1,758
Metallurgical Engineering	(12) 1,208	(11) 1,338	(8) 1,418	(7) 1,653	(4) 1,637	(5) 1,755	(8) 2,128	(20) 2,012	(2) 1,725	(248) 1,712
Nuclear and Reactor Engineering	(113) 1,265	(87) 1,419	(36) 1,650	(25) 1,727	(25) 1,903	(18) 2,123	(52) 2,217	(50) 2,206	(8) 2,212	(1,109) 1,771
Total Engineering	(958) 1,229	(929) 1,364	(780) 1,553	(630) 1,737	(566) 1,885	(580) 1,987	(819) 2,097	(1,093) 2,115	(116) 2,152	(18,840) 1,777
Agricultural and Biological Sciences	(60) 890	(59) 996	(36) 1,175	(14) 1,210	(28) 1,533	(19) 1,580	(32) 1,701	(27) 1,750	(3) 1,308	(841) 1,292
Atmospheric, Earth, Marine & Space Sciences	(10) 1,055	(7) 1,153	(5) 1,255	(2) 1,750	-	(6) 1,875	(2) 2,050	(5) 2,085	-	(120) 1,518
Chemistry	(113) 1,013	(86) 1,140	(90) 1,288	(67) 1,488	(53) 1,495	(51) 1,612	(90) 1,707	(108) 1,723	(21) 1,757	(2,061) 1,476
Computer Sciences	(159) 1,141	(133) 1,259	(97) 1,458	(64) 1,629	(52) 1,829	(69) 1,907	(52) 1,894	(44) 1,933	(5) 2,015	(1,812) 1,521
Mathematics and Statistics	(20) 1,077	(31) 1,226	(28) 1,494	(36) 1,811	(32) 1,848	(34) 1,985	(30) 2,105	(30) 1,935	(6) 1,883	(686) 1,755
Physics	(22) 1,122	(21) 1,255	(40) 1,523	(21) 1,705	(29) 1,802	(36) 1,856	(46) 2,139	(53) 2,162	(11) 2,279	(751) 1,860
Psychology	(1) 1,025	(8) 1,068	(5) 1,265	-	(2) 1,550	(7) 1,917	(2) 1,975	(2) 1,925	-	(71) 1,477
Economics	(8) 1,075	(7) 1,267	(1) 1,675	(3) 1,258	(2) 1,775	(1) 1,575	(5) 1,595	(7) 2,096	(3) 1,525	(101) 1,636

*Total includes all years since first degree.

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1976.

TABLE 45

NUMBER AND MEAN MONTHLY SALARIES OF MASTER'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1976

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Aeronautical and Astronautical Engineering	(5) $1,205	(14) $1,396	(32) $1,659	(43) $1,818	(66) $2,038	(57) $2,067	(51) $2,182	(65) $2,239	(11) $2,070	(1,024) $2,030
Chemical Engineering	(17) 1,386	(36) 1,509	(22) 1,645	(30) 1,865	(26) 2,005	(16) 2,042	(29) 2,187	(26) 2,443	(10) 2,740	(696) 1,979
Electrical and Electronic Engineering	(69) 1,309	(149) 1,417	(179) 1,603	(207) 1,824	(193) 1,960	(164) 2,079	(184) 2,189	(212) 2,236	(43) 2,280	(4,187) 1,937
Industrial Engineering	(6) 1,283	(5) 1,305	(4) 1,525	(1) 1,625	(5) 2,055	-	(2) 1,775	(2) 2,275	-	(89) 1,871
Materials Engineering	(3) 1,291	(3) 1,541	(2) 1,425	(8) 1,550	(1) 1,875	(7) 2,110	(11) 2,047	(14) 1,932	(1) 2,575	(157) 1,888
Mechanical Engineering	(32) 1,335	(50) 1,471	(36) 1,584	(44) 1,782	(30) 1,888	(32) 1,957	(29) 2,056	(42) 2,186	(7) 2,039	(972) 1,852
Metallurgical Engineering	(3) 1,241	(11) 1,356	(7) 1,546	(10) 1,575	(8) 1,887	(4) 1,962	(8) 2,143	(8) 2,175	(2) 2,812	(152) 1,857
Nuclear Engineering	(16) 1,403	(35) 1,417	(38) 1,618	(29) 1,892	(31) 2,016	(29) 2,119	(26) 2,247	(23) 2,282	(7) 2,632	(651) 1,900
Total Engineering	(158) 1,323	(320) 1,429	(333) 1,611	(385) 1,809	(374) 1,974	(316) 2,060	(357) 2,172	(416) 2,230	(84) 2,313	(8,269) 1,933
Agricultural and Biological Sciences	(1) 925	(28) 1,166	(30) 1,330	(21) 1,453	(17) 1,477	(16) 1,675	(10) 1,810	(16) 2,078	(3) 1,558	(501) 1,565
Atmospheric, Earth, Marine & Space Sciences	(2) 1,000	(4) 1,250	(9) 1,275	(4) 1,512	(1) 2,075	(4) 2,000	(5) 1,985	(4) 1,850	(1) 1,225	(123) 1,692
Chemistry	(6) 1,133	(22) 1,211	(37) 1,368	(26) 1,538	(24) 1,539	(31) 1,729	(39) 1,816	(56) 1,941	(10) 1,970	(854) 1,711
Economics	(4) 1,262	(7) 1,289	(8) 1,500	(9) 1,730	(3) 1,941	(7) 1,982	(4) 2,025	(12) 2,262	(2) 1,750	(168) 1,955
Computer Sciences	(12) 1,166	(44) 1,297	(56) 1,496	(55) 1,735	(41) 1,898	(27) 1,945	(30) 2,076	(22) 2,151	(5) 1,785	(825) 1,698
Mathematics and Statistics	(8) 1,231	(10) 1,305	(19) 1,532	(36) 1,748	(24) 1,920	(28) 2,041	(22) 2,218	(19) 2,253	(2) 2,250	(507) 1,898
Physics	(2) 1,250	(10) 1,310	(22) 1,615	(23) 1,701	(31) 1,858	(26) 1,930	(36) 2,210	(28) 2,224	(7) 2,332	(649) 2,005
Psychology	(1) 875	(4) 1,212	(2) 1,325	(6) 1,500	(1) 1,925	(4) 1,762	(10) 1,860	(4) 1,912	-	(113) 1,784

*Total includes all years since first degree.

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1976.

TABLE 46

NUMBER AND MEAN MONTHLY SALARIES OF DOCTORATE DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1976

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	5	7	10	13	15	18	22	26-17	30-31	Total*
Aeronautical and Astronautical Engineering	(2) $1,675	(3) $1,791	(11) $2,097	(22) $2,129	(12) $2,208	(13) $2,278	(4) $2,325	(5) $2,675	(2) $2,000	(225) $2,182
Chemical Engineering	(14) 1,771	(31) 1,841	(42) 2,090	(37) 2,364	(34) 2,357	(19) 2,455	(22) 2,701	(30) 2,751	(6) 3,104	(753) 2,369
Electrical and Electronic Engineering	(11) 1,643	(25) 1,803	(88) 1,915	(75) 2,126	(46) 2,141	(34) 2,430	(23) 2,283	(34) 2,444	(16) 2,562	(1,010) 2,185
Materials Engineering	(1) 1,675	(4) 1,712	(2) 1,850	(10) 2,045	(10) 2,080	(2) 2,400	(4) 2,162	(7) 2,389	-	(110) 2,116
Mechanical Engineering	(4) 1,737	(12) 1,787	(29) 1,900	(22) 2,072	(20) 2,222	(15) 2,371	(8) 2,237	(7) 2,650	(1) 2,375	(329) 2,138
Metallurgical Engineering	-	(11) 1,693	(9) 1,897	(9) 2,075	(13) 2,221	(5) 2,075	(8) 2,368	(4) 2,437	-	(161) 2,087
Nuclear Engineering	(1) 1,475	(7) 1,703	(21) 1,910	(23) 2,108	(21) 2,336	(8) 2,293	(6) 2,591	(6) 2,512	(2) 2,550	(260) 2,175
Total Engineering	(34) 1,700	(99) 1,784	(215) 1,951	(215) 2,161	(171) 2,240	(106) 2,368	(80) 2,438	(100) 2,592	(30) 2,635	(3,068) 2,218
Agricultural and Biological Sciences	(11) 1,315	(19) 1,451	(35) 1,643	(41) 1,834	(26) 2,005	(17) 2,130	(12) 2,312	(31) 2,294	(9) 2,547	(594) 1,907
Atmospheric, Earth, Marine & Space Sciences	7	(4) 1,525	(17) 1,680	(10) 1,900	(14) 1,817	(9) 2,036	(3) 2,208	(4) 2,362	(1) 2,325	(159) 1,912
Chemistry	(11) 1,575	(48) 1,604	(87) 1,765	(86) 1,941	(69) 2,041	(33) 2,099	(39) 2,326	(92) 2,431	(14) 2,408	(1,429) 2,079
Computer Sciences	(1) 1,625	(5) 1,525	(15) 1,811	(15) 2,055	(6) 1,933	(3) 1,725	(1) 2,625	(2) 2,250	(2) 2,800	(157) 1,943
Economics	(1) 1,775	(5) 1,765	(5) 2,025	(7) 2,025	(5) 2,315	(2) 2,575	(4) 2,287	(1) 3,550	(1) 2,425	(88) 2,229
Mathematics and Statistics	(2) 1,700	(8) 1,812	(12) 1,875	(16) 1,968	(13) 2,130	(13) 2,476	(3) 2,491	(7) 2,496	(4) 2,875	(254) 2,163
Physics	(1) 1,525	(12) 1,679	(76) 1,767	(72) 2,002	(62) 2,179	(49) 2,237	(34) 2,361	(74) 2,587	(14) 2,641	(1,128) 2,173
Psychology	(1) 1,375	(12) 1,491	(8) 1,756	(7) 1,946	(8) 1,862	(3) 1,958	(2) 2,125	(14) 2,339	(2) 2,075	(152) 1,896

*Total includes all years since first degree.

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists And Engineers Engaged in Research and Development Activities, November 1, 1976.

TABLE 47

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY DEGREE LEVEL, TYPE OF ESTABLISHMENT AND SELECTED YEARS AFTER FIRST DEGREE, 1976

TYPE OF ESTABLISHMENT & DEGREE LEVEL	SELECTED YEARS SINCE FIRST DEGREE										
	1	3	5	7	10	13	15	20-21	24-25	30-31	Total+
BACHELOR'S DEGREE											
Non-Profit Research Inst.	(103) $ 877	(128) $ 975	(119) $1,106	(78) $1,268	(53) $1,305	(45) $1,591	(50) $1,521	(51) $1,660	(63) $1,746	(18) $1,619	(1,749) $1,364
Educational Institutions	(26) 961	(21) 1,051	(17) 1,160	(14) 1,139	(10) 1,400	(11) 1,393	(4) 1,956	(5) 1,835	(11) 1,511	(5) 1,895	(320) 1,336
Contract Research Centers	(91) 1,166	(149) 1,311	(72) 1,421	(92) 1,598	(84) 1,732	(86) 1,822	(97) 1,937	(178) 2,131	(218) 2,166	(40) 2,210	(3,201) 1,864
Federal Establishments	(98) 1,042	(116) 1,206	(137) 1,373	(149) 1,537	(169) 1,828	(211) 1,966	(240) 2,126	(251) 2,167	(263) 2,234	(33) 2,238	(4,764) 1,939
Total Industry	(772) 1,150	(1,026) 1,272	(645) 1,394	(849) 1,521	(581) 1,697	(464) 1,806	(470) 1,890	(672) 2,012	(926) 2,034	(95) 2,029	(17,115) 1,683
MASTER'S DEGREE											
Non-Profit Research Inst.	(3) 1,158	(36) 1,229	(63) 1,286	(57) 1,412	(55) 1,639	(43) 1,706	(44) 1,797	(58) 1,921	(55) 2,077	(9) 1,552	(1,221) 1,698
Educational Institutions	(2) 1,225	(8) 1,181	(7) 1,189	(22) 1,338	(8) 1,262	(5) 1,545	(4) 1,550	(7) 2,003	(4) 1,625	(3) 1,508	(205) 1,538
Contract Research Centers	(3) 1,275	(66) 1,351	(114) 1,462	(93) 1,612	(126) 1,854	(108) 1,955	(104) 2,073	(127) 2,184	(148) 2,295	(40) 2,237	(2,813) 1,979
Federal Establishments	(6) 1,275	(43) 1,170	(68) 1,400	(85) 1,521	(104) 1,719	(123) 1,964	(110) 2,065	(92) 2,157	(83) 2,178	(16) 2,117	(2,121) 1,936
Total Industry	(34) 1,302	(213) 1,372	(264) 1,454	(329) 1,586	(358) 1,777	(303) 1,945	(253) 2,020	(289) 2,146	(360) 2,192	(71) 2,333	(7,156) 1,889
DOCTORATE DEGREE											
Non-Profit Research Inst.	-	(3)** 1,325	(11) 1,329	(40) 1,561	(63) 1,701	(73) 1,904	(45) 1,907	(30)* 2,125	(22)* 2,225	(13) 2,251	(1,020) 1,932
Educational Institutions	-	(1)** 1,325	(3) 1,758	(15) 1,348	(27) 1,637	(14) 1,592	(13) 1,886	(7)* 2,010	(1)* 2,525	(3) 2,241	(258) 1,796
Contract Research Centers	-	(8)** 1,693	(21) 1,686	(60) 1,755	(184) 1,871	(131) 2,090	(152) 2,228	(83)* 2,373	(36)* 2,437	(29) 2,554	(2,563) 2,196
Federal Establishments	-	(4)** 1,775	* 5) 1,545	(25) 1,563	(72) 1,761	(96) 1,978	(76) 2,048	(42)* 2,339	(33)* 2,338	(16) 2,762	(1,322) 2,119
Total Industry	-	(44)** 1,450	(53) 1,655	(138) 1,743	(258) 1,947	(252) 2,137	(213) 2,225	(121)* 2,388	(109)* 2,522	(41) 2,598	(4,062) 2,197

+ Includes all years since first degree. *Includes only the first year listed in the set.

** Figures for 3-4 years since first degree.

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1976.

TABLE 48

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY HIGHEST DEGREE FIELD AND SELECTED YEARS SINCE DEGREE, 1976

HIGHEST DEGREE FIELD	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total°
Engineering[1]	(842) $1,230	(824) $1,363	(713) $1,553	(561) $1,749	(484) $1,888	(500) $1,992	(682) $2,108	(864) $2,122	(101) $2,126	(16,267) $1,775
Chemistry [1]	(103) 1,048	(89) 1,157	(95) 1,348	(63) 1,543	(54) 1,637	(61) 1,684	(112) 1,816	(163) 1,875	(31) 2,065	(2,386) 1,614
Physics[1]	(37) 1,206	(57) 1,309	(96) 1,561	(65) 1,731	(87) 1,867	(86) 2,004	(86) 2,149	(101) 2,186	(23) 2,226	(1,817) 1,876
Other Physical Sciences[1]	(41) 1,115	(24) 1,283	(9) 1,458	(4) 1,512	(8) 1,662	(7) 1,939	(8) 1,818	(23) 1,914	(3) 1,775	(392) 1,505
Life Sciences[1]	(73) 946	(60) 1,031	(36) 1,172	(21) 1,286	(24) 1,464	(23) 1,496	(32) 1,693	(35) 1,799	(5) 1,535	(901) 1,292
Social Sciences[1]	(21) 986	(18) 1,163	(20) 1,325	(8) 1,550	(7) 1,553	(13) 1,909	(18) 1,752	(8) 1,556	(2) 1,300	(304) 1,487
Mathematics & Statistics[1]	(113) 1,107	(101) 1,272	(92) 1,479	(85) 1,692	(68) 1,892	(90) 1,933	(81) 2,055	(77) 2,058	(7) 1,867	(1,970) 1,654
Engineering[2]	(159) 1,325	(292) 1,430	(310) 1,608	(345) 1,810	(337) 1,987	(279) 2,075	(282) 2,182	(318) 2,255	(68) 2,346	(7,030) 1,928
Chemistry[2]	(2) 1,250	(17) 1,277	(29) 1,461	(26) 1,569	(30) 1,645	(29) 1,773	(4) 1,942	(59) 1,986	(11) 2,129	(908) 1,823
Physics[2]	(2) 1,425	(17) 1,360	(37) 1,496	(44) 1,718	(55) 1,875	(51) 1,976	(54) 2,204	(58) 2,303	(14) 2,246	(1,088) 1,992
Other Physical Sciences[2]	(2) 1,075	(15) 1,245	(12) 1,320	(17) 1,722	(11) 1,938	(10) 1,835	(14) 2,192	(12) 2,058	(14) 2,362	(347) 1,736
Life Sciences[2]	(3) 1,158	(32) 1,187	(30) 1,361	(25) 1,471	(14) 1,521	(19) 1,717	(17) 1,751	(21) 2,072	(2) 1,700	(514) 1,581
Social Sciences[2]	(3) 1,091	(16) 1,290	(15) 1,511	(14) 1,682	(8) 1,700	(10) 1,970	(17) 1,942	(8) 1,831	- -	(270) 1,755
Mathematics & Statistics[2]	(11) 1,143	(32) 1,300	(42) 1,532	(61) 1,758	(46) 1,969	(45) 1,990	(47) 2,162	(40) 2,277	(12) 2,037	(978) 1,887
Engineering[3]	- -	(11)* 1,670	(76) 1,804	(187) 1,936	(182) 2,151	(143) 2,246	(87)+ 2,374	(39)+ 2,598	(22) 2,652	(2,535) 2,198
Chemistry[3]	- -	(3)* 1,425	(57) 1,672	(98) 1,850	(101) 2,055	(80) 2,182	(57)+ 2,319	(64)+ 2,485	(23) 2,505	(1,894) 2,203
Physics[3]	- -	(2) 1,600	(25) 1,689	(121) 1,838	(103) 2,060	(118) 2,206	(64)+ 2,401	(33)+ 2,541	(28) 2,680	(1,794) 2,215
Other Physical Sciences[3]	- -	(5) 1,615	(16) 1,684	(27) 1,878	(26) 2,000	(38) 2,109	(13)+ 2,453	(11)+ 2,584	(2) 2,375	(430) 2,097
Life Sciences[3]	- -	(1) 1,475	(19) 1,511	(33) 1,691	(42) 1,834	(21) 1,917	(22)+ 2,063	(17)+ 2,101	(11) 2,229	(570) 1,938
Social Sciences[3]	- -	(1) 1,675	(24) 1,581	(23) 1,833	(21) 1,984	(13) 1,955	(3)+ 2,375	(8)+ 2,368	(3) 2,158	(298) 1,993
Mathematics & Statistics[3]	- -	- -	(10) 1,785	(18) 1,852	(21) 2,017	(11) 2,079	(4)+ 2,537	(7)+ 2,332	(3) 2,925	(321) 2,150

° Total includes all years since first degree
* Includes both 3-4 years since degree
+ Includes only the first year listed in the set
[1] Bachelor's
[2] Master's
[3] Doctorates
- Indicates no data available

SOURCE: Battelle, Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1976.

TABLE 49

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION, SEX, AND SELECTED YEARS SINCE DEGREE, 1976

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Biological and Biomedical Sciences[1]	(25) $905	(24) $997	(17) $1,272	(7) $1,310	(17) $1,645	(16) $1,675	(21) $1,775	(20) $1,978	(1) $1,475	(454) $1,434
Biological and Biomedical Sciences[2]	(29) 861	(32) 989	(17) 1,019	(7) 1,110	(8) 1,212	(3) 1,075	(7) 1,303	(7) 1,096	(2) 1,225	(325) 1,061
Chemistry[1]	(84) 1,026	(62) 1,208	(63) 1,312	(52) 1,530	(40) 1,538	(43) 1,663	(72) 1,787	(95) 1,775	(16) 1,885	(1,606) 1,545
Chemistry[2]	(29) 976	(24) 964	(27) 1,234	(15) 1,341	(13) 1,363	(8) 1,337	(18) 1,386	(13) 1,340	(5) 1,345	(455) 1,235
Mathematics & Statistics[1]	(8) 1,168	(20) 1,220	(20) 1,492	(27) 1,843	(26) 1,919	(27) 2,049	(28) 2,156	(23) 1,996	(1) 2,075	(515) 1,884
Mathematics & Statistics[2]	(12) 1,016	(11) 1,238	(8) 1,500	(9) 1,713	(6) 1,541	(7) 1,739	(2) 1,400	(7) 1,732	(5) 1,845	(171) 1,488

* Total includes all years since first degree. [1] Males only. [2] Females only.

SOURCE: INDUSTRIAL RESEARCH Magazine, March 1977

CHART 4 - SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY PROFESSION, 1975-1977

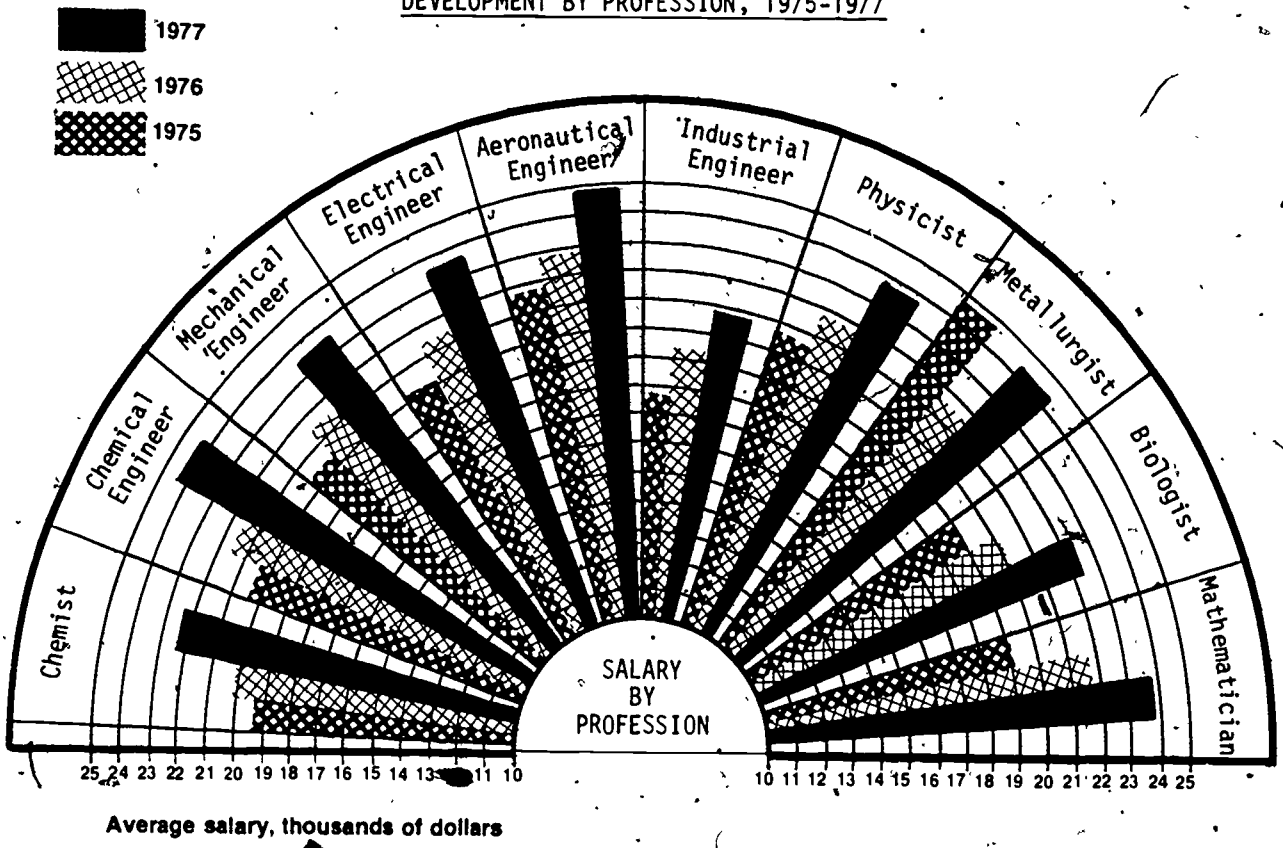
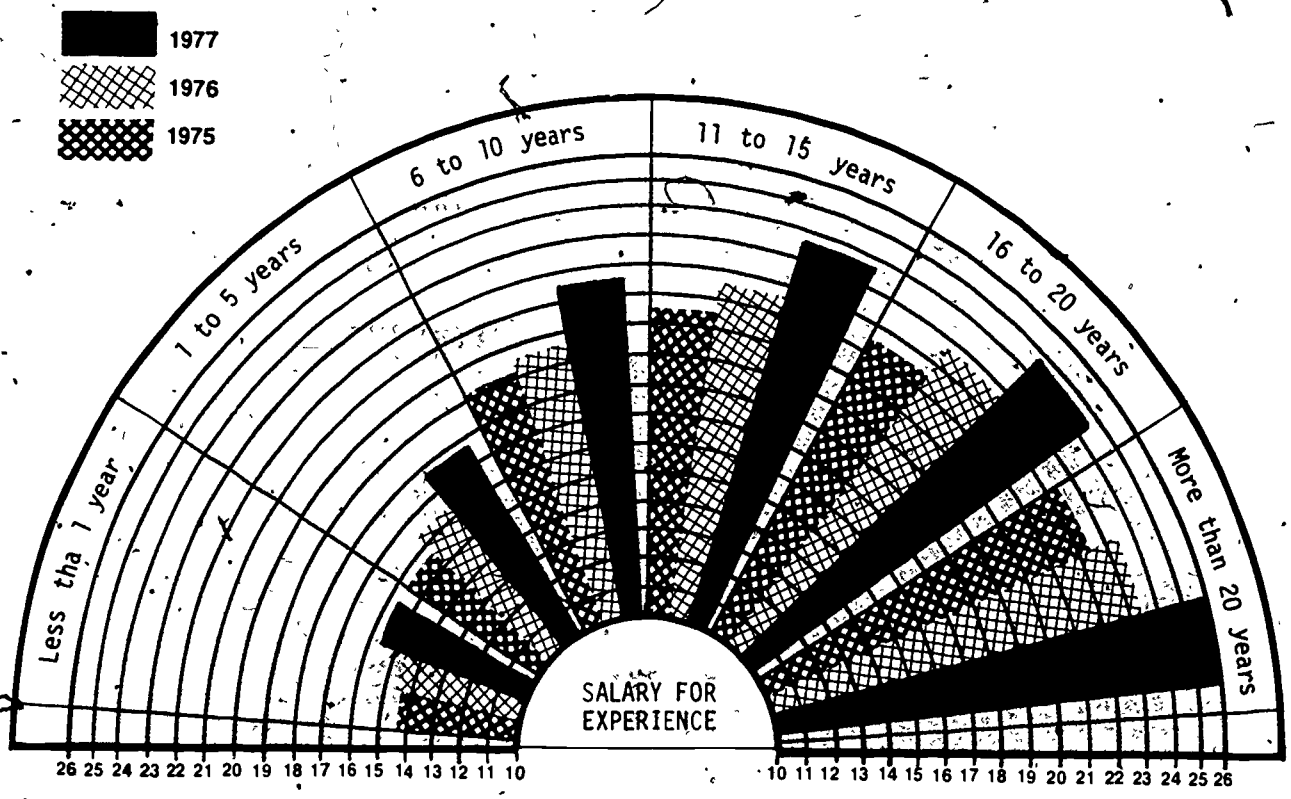
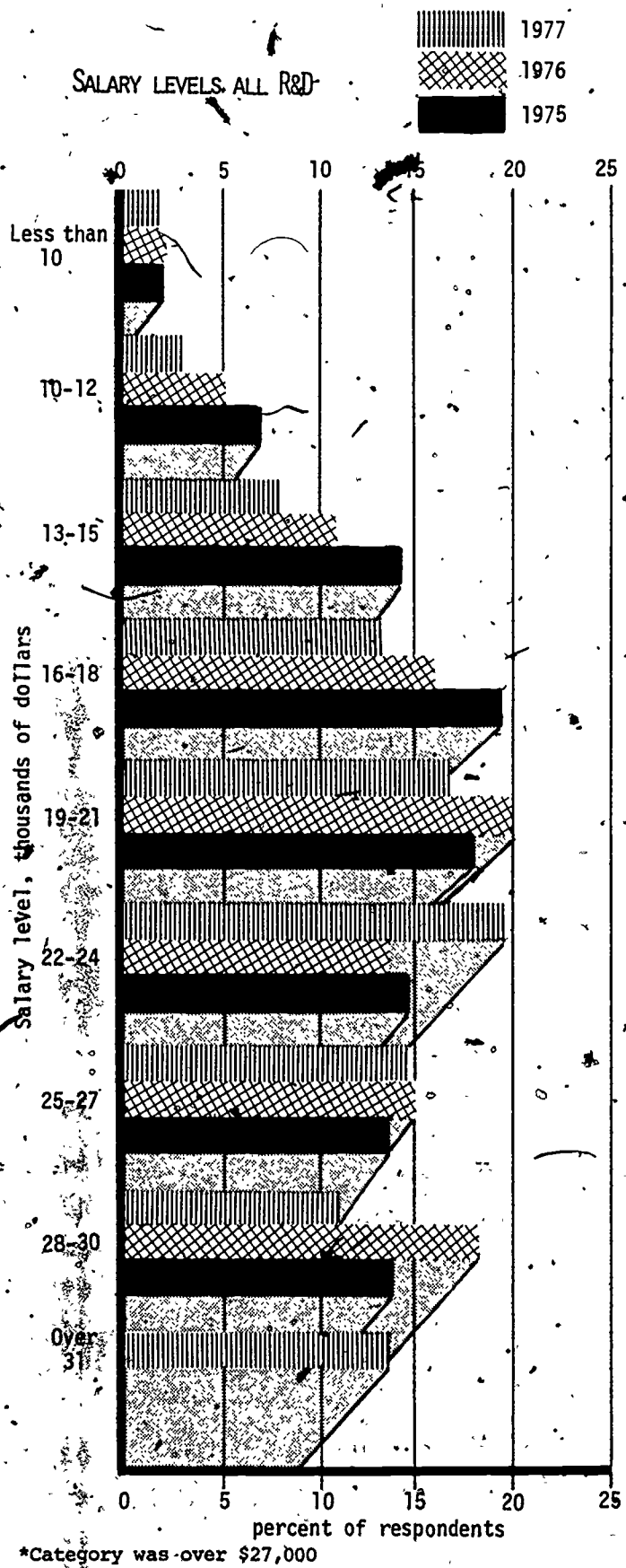


CHART 5 - SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY YEARS OF EMPLOYMENT, 1975-1977



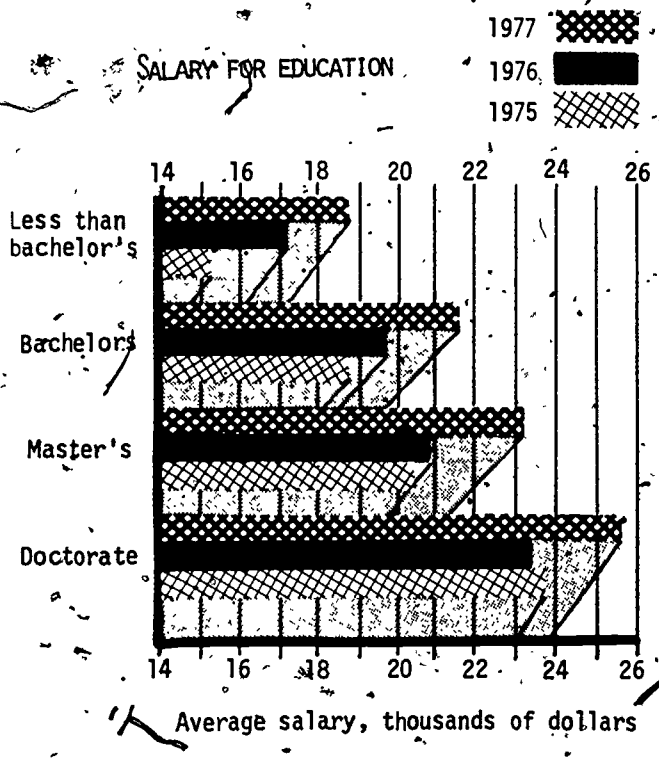
SOURCE: INDUSTRIAL RESEARCH Magazine, March 1977.

CHART 6 - SALARIES OF ALL SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT, 1975-1977



*Category was over $27,000

CHART 5 - SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY DEGREE LEVERL, 1975-1977



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Press Release dated July 11, 1977.

TABLE 50

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1977*

OCCUPATION AND CLASS	Number* of Employees	Average Salaries°	
		Monthly	Annual
Accountants II	15,271	$1,219	$14,624
Accountants III	35,169	1,379	16,545
Accountants IV	22,227	1,697	20,367
Chief Accountants II	1,197	2,110	25,320
Chief Accountants III	782	2,610	31,324
Chemists I	2,110	1,073	12,872
Chemists II	4,171	1,203	14,439
Chemists III	9,557	1,467	17,600
Chemists IV	11,143	1,806	21,674
Chemists V	9,132	2,184	26,214
Chemists VI	4,565	2,544	30,526
Chemists VII	1,564	3,027	36,329
Chemists VIII	438	3,720	44,642
Engineers I	15,892	1,218	14,616
Engineers II	32,784	1,352	16,221
Engineers III	92,340	1,558	18,696
Engineers IV	125,903	1,839	22,072
Engineers V	89,094	2,135	25,620
Engineers VI	46,235	2,448	29,376
Engineers VII	17,933	2,750	32,999
Engineers VIII	4,704	3,172	38,063
Engineering Technicians I	3,142	811	9,7[illegible]
Engineering Technicians II	15,033	946	11,35[illegible]
Engineering Technicians III	25,056	1,096	13,151
Engineering Technicians IV	28,460	1,268	15,221
Engineering Technicians V	18,327	1,436	17,237
Attorneys II	1,925	1,661	19,938
Attorneys III	2,504	2,122	25,460
Attorneys IV	2,575	2,581	30,973
Clerk, Accounting I	96,181	678	8,138
Clerk, Accounting II	82,419	866	10,388
Secretaries II	78,726	842	10,100
Secretaries III	85,480	930	11,159
Drafters I	18,140	863	10,354
Drafters II	31,418	1,069	12,833
Drafters III	29,568	1,319	15,828
Computer Operators II	8,889	789	9,463
Computer Operators III	25,636	877	10,529
Computer Operators IV	16,251	1,046	12,557

* Occupational Employment estimates relate to the total in all establishments within scope of the survey and not the number actually surveyed.

° Preliminary

50

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1976, pp. 12, 13.

TABLE 51

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1976

OCCUPATION AND CLASS	Number of Employees	Monthly Salaries		Annual Salaries	
		Mean	Median	Mean	Median
Accountants II	15,559	$1,117	$1,083	$13,394	$12,995
Accountants III	31,603	1,286	1,263	15,428	15,120
Accountants IV	20,498	1,562	1,543	18,738	18,522
Chief Accountants II	1,132	1,897	1,851	22,753	22,212
Chief Accountants III	742	2,345	2,291	28,136	27,489
Chemists I	1,284	1,040	1,037	12,473	12,445
Chemists II	3,337	1,174	1,180	14,077	14,160
Chemists III	8,538	1,383	1,374	16,589	16,493
Chemists IV	9,699	1,703	1,694	20,429	20,330
Chemsits V	7,555	2,009	1,977	24,099	23,724
Chemists VI	4,104	2,406	2,357	28,868	28,289
Chemists VII	1,477	2,797	2,725	33, 559	32,700
Chemists VIII	412	3,394	3,296	40,723	39,552
Engineers I	11,648	1,160	1,151	13,918	13,817
Engineers II	29,235	1,266	1,250	15,184	14,994
Engineers III	82,307	1,457	1,438	17,482	17,258
Engineers IV	119,970	1,730	1,708	20,749	20,496
Engineers V	85,907	2,007	1,994	24,082	23,927
Engineers VI	44,284	2,312	2,280	27,737	27,360
Engineers VII	17,608	2,571	2,500	30,850	30,000
Engineers VIII	4,526	3,020	2,920	36,236	35,040
Engineering Technicians I	3,005	756	747	9,064	8,960
Engineering Technicians II	12,355	904	875	10,841	10,500
Engineering Technicians III	23,869	1,022	1,000	12,258	12,000
Engineering Technicians IV	28,795	1,182	1,173	14,178	14,078
Engineering Technicians V	18,407	1,341	1,320	16,086	15,840
Attorneys II	1,565	1,556	1,500	18,667	18,000
Attorneys III	1,916	2,018	1,974	24,205	23,691
Attorneys IV	1,948	2,486	2,457	29,828	29,488
Clerk, Accounting I	91,001	637	600	7,636	7,200
Clerk, Accounting II	74,328	805	767	9,652	9,204
Secretaries II	64,553	804	782	9,641	9,384
Secretaries III	69,748	868	845	10,413	10,140
Drafters I	17,602	814	782	9,763	9,385
Drafters II	29,395	1,003	975	12,029	11,700
Drafters III	31,426	1,274	1,217	15,288	14,599
Computer Operators II	8,172	732	713	8,774	8,551
Computer Operators III	21,718	847	830	10,162	9,959
Computer Operators IV	13,617	991	964	11,881	11,563

SOURCE: Chemical and Engineering News, Vol. 55, June 21, 1976 pp. 47, 50; Vol. 56, June 20, 1977, p. 31.

TABLE 52

MEDIAN ANNUAL SALARIES FOR CHEMISTS AND CHEMICAL ENGINEERS OF ALL EXPERIENCE LEVELS BY DEGREE, 1973-1977 (WEIGHTED AVERAGE)

YEAR	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
1973	$16,800	$17,500	$20,500	$20,200	$22,000	$23,100
1974	17,500	18,400	21,700	21,300	22,400	24,800
1975	18,000	19,800	23,000	24,000	25,000	26,000
1976	19,800	20,500	24,700	26,000	27,000	29,000
1977	21,000	22,000	26,000	28,000	30,000	30,000

52 SOURCE: American Chemical Society, 1977 Report of Chemists' Salaries and Employment Status, June 1977.

TABLE 53

MEDIAN ANNUAL SALARIES OF CHEMISTS BY TYPE OF EMPLOYER, DEGREE LEVEL AND SEX, 1977

Type of Employer	DEGREE LEVEL AND SEX								
	Bachelor's			Master's			Ph.D.'s		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Industry									
Manufacturing	$23,000	$16,000	$22,000	$24,000	$19,400	$24,000	$29,600	$24,000	$29,500
Non-Manufacturing	20,000	13,200	19,000	23,600	17,500	22,000	28,800	21,000	28,000
Education									
College/ Univ.	13,000	11,500	13,000	16,000	13,500	15,500	20,000	16,500	20,000
High School, Other Schools	14,200	12,800	12,800	17,500	16,000	16,600	15,500	16,500	16,000
Government									
Federal	24,500	21,000	23,900	26,000	21,000	25,200	29,000	24,000	29,000
State/Local	16,400	14,300	16,000	18,000	16,300	17,600	22,000	16,800	21,800
Self Employment	26,000	*	26,000	26,000	*	26,000	30,000	*	30,000
Hospital/ Ind. Lab.	17,300	12,500	14,000	19,000	14,200	16,000	25,000	17,000	25,000
Nonprofit Research Inst.	14,000	15,800	15,800	20,000	16,000	19,000	21,500	20,000	25,000
Other	14,000	*	14,000	20,000	*	20,000	21,500	*	21,500

*Sample too small for meaningful data.

SOURCE: Chemical and Engineering News, Vol. 55, June 20, 1977, p. 33

TABLE 54

MEDIAN ANNUAL SALARIES OF CHEMISTS BY WORK ACTIVITY, DEGREE LEVEL AND SEX, 1977

DEGREE LEVEL AND SEX	WORK ACTIVITY			
	Management	Research & Development	Teaching	Marketing & Production
BACHELOR'S				
Men	$27,500	$20,500	$12,000	$21,000
Women	17,300	15,800	12,800	15,000
Total	27,000	19,900	12,000	20,700
MASTER'S				
Men	29,600	22,000	17,200	22,500
Women	20,000	18,400	14,800	14,500
Total	29,000	21,000	16,300	22,200
PH.D.				
Men	35,000	26,000	20,000	28,000
Women	28,300	21,000	16,500	25,000
Total	35,000	26,000	19,800	28,000

SOURCE: Chemical and Engineering News, Vol. 54, June 21, 1976, p. 50.

TABLE 55

MEDIAN ANNUAL SALARIES OF CHEMISTS BY TYPE OF EMPLOYER, DEGREE LEVEL AND SEX, 1976

DEGREE LEVEL AND SEX	TYPE OF EMPLOYER				
	Industry	Educational Institutions	Government	Nonprofit Organizations	Self-Employed
BACHELOR'S					
Men	$20,800	$11,000	$20,000	$17,000	$20,000
Women	14,700	11,400	18,400	13,800	*
Total	20,000	11,300	19,700	16,000	20,000
MASTER'S					
Men	23,000	17,000	21,000	18,600	24,000
Women	17,200	13,000	18,000	15,500	*
Total	22,200	16,000	20,700	18,000	24,000
PH.D.					
Men	27,500	19,800	27,500	24,800	29,000
Women	20,000	15,000	23,200	19,100	*
Total	27,100	19,400	27,000	24,500	29,000

* Sample too small for meaningful data.

TABLE 56

MEDIAN ANNUAL SALARIES OF CHEMISTS BY WORK ACTIVITY, DEGREE LEVEL AND SEX, 1976

DEGREE LEVEL AND SEX	WORK ACTIVITY				
	Management	Research & Development	Teaching	Marketing & Production	Other*
BACHELOR's					
Men	$26,400	$19,000	$11,000	$19,500	$16,800
Women	20,000	14,500	10,500	13,500	15,000
Total	26,000	18,600	10,600	18,800	16,500
MASTER'S					
Men	27,500	20,500	16,700	22,000	18,800
Women	19,000	16,000	13,500	16,000	16,800
Total	27,000	20,000	16,000	21,000	18,000
PH.D.					
Men	32,700	25,000	19,500	26,500	23,500
Women	26,000	20,000	15,000	18,600	20,300
Total	32,500	24,600	19,000	26,100	22,700

* Includes forensic analysis, other analysis, consulting, writing, programming.

SOURCE: Chemical and Engineering News, Vol. 55, June 20, 1977, pp. 33, 35.

TABLE 57

MEDIAN ANNUAL SALARIES OF CHEMISTS BY DEGREE, SPECIALTY, AND SEX 1977

DEGREE AND SEX	SPECIALTY					
	Analytical	Inorganic	Organic	Physical, Theoretical	Polymer, Macromol.	Bio-Chemistry
BACHELOR'S						
Men	$20,000	$24,000	$23,000	$23,000	$23,400	$20,000
Women	15,300	16,500	16,200	15,000	17,600	15,800
Total	19,500	24,000	22,000	22,500	23,000	18,200
MASTER'S						
Men	21,000	25,700	24,700	24,000	25,000	21,600
Women	17,200	18,000	18,000	*	19,000	16,400
Total	20,000	24,000	24,000	24,000	24,500	20,400
PH.D.						
Men	24,000	22,000	25,000	23,500	29,600	27,000
Women	19,000	15,100	20,000	19,600	27,800	20,000
Total	24,000	22,000	25,000	23,000	29,500	26,000

TABLE 58

MEDIAN SALARIES AND PERCENTAGE DISTRIBUTION OF CHEMISTS BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1977

GEOGRAPHICAL REGION	B.S.		M.S.		PH.D.	
	Salary	% Working in Region	Salary	% Working in Region	Salary	% Working in Region
Pacific	$20,000	11.6%	$21,500	10.0%	$25,000	9.3%
Mountain	20,100	3.1	19,300	2.7	23,000	3.3
West North Central	18,800	4.9	19,000	6.1	25,000	6.9
East North Central	20,000	23.7	21,200	22.4	26,000	20.5
West South Central	22,000	6.9	20,300	7.1	25,000	6.9
East South Central	21,500	3.6	22,500	3.6	24,000	3.6
Middle Atlantic	22,500	25.6	23,000	26.9	27,000	25.6
South Atlantic	22,000	14.2	22,500	14.2	26,000	16.9
New England	20,500	6.4	22,000	6.9	24,500	7.0

SOURCE: Chemical and Engineering News, Vol. 54, June 21, 1976, pp. 49, 51.

TABLE 59

MEDIAN ANNUAL SALARIES OF CHEMISTS BY DEGREE, SPECIALTY, AND SEX, 1976

DEGREE AND SEX	SPECIALTY						
	Analytical	Inorganic	Organic	Physical, Theoretical	Polymer, Macromol.	Bio-Chemistry	Other*
BACHELOR'S							
Men	$18,500	$21,000	$21,500	$20,600	$21,800	$17,300	$21,500
Women	14,000	17,600	14,500	19,000	14,500	12,500	15,000
Total	18,000	21,000	21,000	20,000	21,500	15,500	20,400
MASTER'S							
Men	20,600	21,300	22,200	21,500	23,400	17,700	21,000
Women	17,200	16,000	14,000	20,300	17,600	16,000	15,000
Total	20,100	21,000	20,900	20,700	23,100	16,800	20,000
PH.D.							
Men	22,600	20,500	23,400	23,000	27,000	25,000	26,000
Women	18,000	16,000	18,400	16,800	19,700	20,000	18,000
Total	22,000	20,200	23,000	23,000	27,000	24,000	25,800

*Includes agricultural & food chemistry, general chemistry, environmental chemistry, information science and computer work.

TABLE 60

MEDIAN SALARIES AND PERCENTAGE DISTRIBUTION OF CHEMISTS BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1976

GEOGRAPHICAL REGION	B.S.		M.S.		PH.D.	
	Salary	% Working in Region	Salary	% Working in Region	Salary	% Working in Region
Pacific	$19,500	13.6	$20,600	12.2	$24,800	12.9
Mountain	20,800	3.4	20,000	3.0	21,500	3.3
West North Central	18,000	7.1	18,800	7.2	23,000	7.7
East North Central	19,000	23.5	20,000	21.6	25,000	20.2
West South Central	20,000	7.4	20,400	6.6	23,000	6.5
East South Central	20,000	3.7	20,000	3.8	22,800	3.9
Middle Atlantic	20,000	23.7	21,000	26.9	25,000	22.5
South Atlantic	20,000	13.6	20,400	14.3	25,400	18.3
New England	21,500	4.0	21,000	4.5	25,000	4.7

SOURCE: Chemical and Engineering News, Vol. 55, June 20, 1977, pp. 34, 35.

TABLE 61

1977 MEDIAN SALARIES OF INDUSTRIAL CHEMISTS AND ALL CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS	B. S.		M. S.		PH. D.	
	All	Industrial	All	Industrial	All	Industrial
1	$11,500	$12,000	$13,200	$14,000	$16,800	$20,000
2-4	13,900	14,000	15,500	16,000	20,000	21,500
5-9	16,400	16,800	17,500	18,800	22,000	25,000
10-14	20,000	20,000	21,100	22,300	25,200	29,100
15-19	22,000	23,000	22,500	24,000	28,000	31,100
20-24	24,000	24,000	26,000	27,500	30,000	33,000
25-29	25,000	25,000	26,800	27,500	32,600	36,000
30-34	26,200	26,500	26,200	28,000	33,000	36,000
35-39	26,000	26,300	27,500	29,000	35,800	37,000
40+	26,600	26,000	30,000	30,000	35,000	35,500
Overall	21,000	22,000	22,000	24,000	26,000	29,500

SOURCE: American Chemical Society, 1977 Report of Chemists' Salaries and Employment Status, June 1977.

TABLE 62

MEDIAN SALARIES OF CHEMISTS BY DEGREE LEVEL, SEX AND YEARS OF EXPERIENCE, 1977

YEARS OF EXPERIENCE	B. S.		M. S.		PH. D.	
	Men	Women	Men	Women	Men	Women
1 or less	$11,500	$12,000	$13,300	$ 9,500	$16,800	$12,800
2-4	14,000	13,200	16,000	13,500	20,000	16,800
5-9	16,700	15,000	17,800	16,800	22,000	19,000
10-14	20,400	19,300	22,000	17,500	25,800	19,300
15-19	23,000	17,100	23,300	19,000	28,200	20,000
20-24	24,500	19,400	26,500	20,400	30,300	22,000
25-29	25,200	22,300	27,000	20,000	33,000	25,500
30-34	26,500	23,500	27,000	18,000	33,000	24,000
35-39	26,500	15,600	28,000	20,400	36,000	26,200
40+	26,600	*	29,000	32,200	35,000	33,900
All levels	22,000	15,800	23,000	17,300	26,000	20,000

* Sample too small for meaningful data.

SOURCE: Chemical and Engineering News, Vol. 54, June 21, 1976, pp. 50,51

TABLE 63

1976 MEDIAN SALARY OF INDUSTRIAL CHEMISTS AND ALL CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

	B. S.		M. S.		PH.D.	
YEARS	All	Industrial	All	Industrial	All	Industrial
1	$11,000	$11,700	$13,000	$14,100	$17,700	$18,500
2-4	13,000	13,300	14,100	15,000	19,000	20,000
5-9	15,900	16,000	17,500	18,000	21,000	24,000
10-14	18,900	19,000	19,200	20,000	24,000	28,000
15-19	21,000	21,600	22,000	24,000	26,400	29,000
20-24	22,500	23,000	23,500	24,700	28,800	31,800
25-59	24,000	24,000	25,200	26,000	30,000	33,500
30-34	24,700	24,000	25,000	25,000	31,000	34,000
35-39	25,200	26,000	24,800	26,000	32,200	35,000
40+	25,000	25,000	30,500	35,500	29,800	29,800
Overall	19,800	20,000	20,500	22,200	24,700	27,100

SOURCE: American Chemical Society, 1976 Report of Chemists' Salaries and Employment Status, July 1976.

TABLE 64

MEDIAN SALARIES OF CHEMISTS BY DEGREE LEVEL, SEX AND YEARS OF EXPERIENCE, 1976

YEARS OF EXPERIENCE	B. S.		M. S.		PH. D.	
	Men	Women	Men	Women	Men	Women
1 or less	$11,000	$11,000	$13,000	$12,500	$17,800	$15,000
2-4	13,200	13,000	14,600	13,000	19,000	15,200
5-9	16,000	13,500	18,000	15,400	21,200	17,200
10-14	19,000	16,200	19,500	18,000	24,000	18,800
15-19	21,000	19,200	22,600	19,000	27,000	20,000
20-24	23,000	20,000	24,000	16,800	29,000	21,000
25-29	24,000	18,500	25,400	19,800	30,000	25,500
30-34	24,700	22,100	25,000	21,000	31,000	28,000
35-39	26,000	17,600	25,000	17,300	33,000	21,300
40+	25,000	15,000	30,500	*	28,600	*
All levels	20,000	14,700	21,300	16,000	25,000	18,800

* Sample too small for meaningful data.

SOURCE: Chemical and Engineering News, Volume 55, June 20, 1977, pp. 34 - 36.

TABLE 65

1977 MEDIAN SALARY AND 1976 INCOME OF CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS OF EXPERIENCE	1977 SALARY			1976 INCOME		
	B. S.	M. S.	PH. D.	B. S.	M. S.	PH. D.
1	$11,500	$13,200	$16,800	$10,700	$12,500	$15,000
2-4	13,900	15,500	20,000	13,300	15,000	18,700
5-9	16,400	17,500	22,000	16,000	17,500	22,000
10-14	20,000	21,100	25,200	20,000	21,000	26,000
15-19	22,000	22,500	28,000	22,000	23,000	29,500
20-24	24,000	26,000	30,000	24,300	26,300	31,400
25-29	25,000	26,800	32,600	25,000	27,000	34,100
30-34	26,200	26,200	33,000	27,500	27,000	34,000
35-39	26,000	27,500	35,800	27,000	28,000	36,300
40+	26,600	30,000	35,000	30,000	30,000	36,800
Overall	21,000	22,000	26,000	21,100	22,300	26,500

SOURCE: American Chemical Society, 1977 Report of Chemists' Salaries and Employment Status, June 1977.

TABLE 66

1977 MEDIAN SALARY AND 1976 INCOME OF CHEMICAL ENGINEERS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS OF EXPERIENCE	1977 SALARY			1976 INCOME		
	B. S.	M. S.	Ph. D.	B.S.	M.S.	Ph. D.
1 or less	$11,700	$17,000	$17,000	$10,500	$20,000	$16,500
2-4	17,000	18,000	22,800	15,800	18,000	22,000
5-9	19,200	18,300	26,000	18,800	17,600	26,000
10-14	23,000	24,000	29,000	22,500	24,000	29,500
15-19	26,000	29,700	31,000	25,500	30,000	32,500
20-24	28,000	35,000	36,000	27,700	33,000	36,000
25-29	30,000	32,500	34,800	30,000	32,000	35,500
30-34	30,000	34,000	34,500	30,000	35,000	38,500
35-39	32,400	34,600	31,000	35,000	36,600	34,500
40+	36,000	40,000	43,000	38,000	40,000	50,000
Overall	28,000	30,000	30,000	28,600	30,000	32,000

SOURCE: American Chemical Society, 1976 Report of Chemists' Salaries and Employment Status, July 1976.

TABLE 67

1976 MEAN SALARY AND 1975 INCOME OF CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS OF EXPERIENCE	1976 SALARY			1975 INCOME		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
1 or less	$11,000	$13,000	$17,700	$ 8,900	$11,000	$13,000
2-4	13,000	14,100	19,000	12,500	13,900	18,000
5-9	15,900	17,500	21,000	15,600	17,500	21,000
10-14	18,900	19,200	24,000	18,500	19,000	24,500
15-19	21,000	22,000	26,400	21,000	22,800	27,500
20-24	22,500	23,500	28,800	23,000	24,000	30,000
25-29	24,000	25,200	30,000	24,000	27,000	31,600
30-34	24,700	25,000	31,000	25,000	25,000	33,000
35-39	25,200	24,800	32,200	26,500	26,000	35,700
40+	25,000	30,500	29,800	28,000	30,000	31,700
Overall	19,800	20,500	24,700	20,000	21,000	25,000

TABLE 68

1976 MEDIAN SALARY AND 1975 INCOME OF CHEMICAL ENGINEERS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS OF EXPERIENCE	1976 SALARY			1975 INCOME		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
1 or less	$14,300	$15,600	$21,000	$ *	$12,700	$17,200
2 - 4	16,100	17,000	21,200	15,500	16,500	20,700
5 - 9	19,500	20,000	23,300	20,000	19,500	23,300
10 - 14	22,000	24,000	27,500	22,000	23,600	29,000
15 - 19	24,500	27,000	30,000	25,000	27,000	30,000
20 - 24	26,000	27,500	33,000	26,500	28,000	35,500
25 - 29	27,500	28,900	33,500	27,900	30,000	35,000
30 - 34	28,500	31,000	35,000	29,700	32,000	40,000
35 - 39	30,000	30,400	34,000	30,000	32,000	35,000
40+	26,200	34,200	38,000	31,000	38,000	38,000
All levels	26,000	27,000	29,000	27,000	27,000	30,000

* Data too small to be meaningful.

SOURCE: American Institute of Biological Sciences, Bioscience, Vol. 27, No. 3, March 1977.

TABLE 69

NUMBER AND SALARY OF AIBS* BIOLOGISTS BY TYPE OF EMPLOYER AND AGE, 1975

EMPLOYER	AGE BRACKET							
	20 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60+
4-Yr. College or University								
Number	36	142	164	140	156	169	170	141
Salary	$13,750	$16,665	$19,558	$23,857	$26,458	$26,109	$29,853	$29,681
2-Yr. College or University								
Number	4	19	25	10	10	7	8	5
Salary	18,125	18,553	20,000	18,000	22,750	25,714	21,250	26,500
Government								
Number	22	27	27	25	31	30	31	23
Salary	13,409	18,611	21,667	24,300	25,726	29,167	30,323	33,261
Industry								
Number	19	18	15	12	11	19	9	8
Salary	11,053	18,194	24,667	27,292	25,225	28,684	29,444	33,125
Other**								
Number	17	42	21	14	21	22	16	19
Salary	11,471	14,048	19,643	22,857	23,690	23,977	24,688	27,763

* American Institute of Biological Sciences
** Other includes high school teachers, medical doctors, and self-employed persons.

TABLE 70

MEAN ANNUAL SALARY OF AIBS BIOLOGISTS BY AGE, SEX AND DEGREE LEVEL, 1976

DEGREE & SEX	AGE AND SALARY							
	20-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
Bachelor's								
Men	$11,000	$14,100	$14,600	*	$14,400	$18,300	$25,600	$27,100
Women	10,000	14,400	14,400	*	*	*	*	*
Master's								
Men	12,900	14,80[illegible]	20,300	$19,700	21,000	23,200	23,100	28,900
Women	12,900	17,30[illegible]	16,400	17,100	13,000	18,500	*	*
Doctorates								
Men	14,700	17,200	20,800	25,600	27,300	28,700	30,300	31,400
Women	16,400	17,200	19,600	21,300	20,900	23,000	23,900	25,800

* Fewer than 4 respondents.

SOURCE: Hitchcock Publishing Company, Infosystems, June 1977.

TABLE 71

AVERAGE NATIONAL WEEKLY SALARIES IN DATA PROCESSING BY JOB DESCRIPTION, 1976 AND 1977

JOB DESCRIPTION	1977 Average Salary	1976 Average Salary	% of Increase (Decrease)
Manager of Data Processing	$444	$436	1.8
Asst. Mgr. of Data Processing	405	381	6.3
Project/Team Leader	415	*	-
Mgr./Supvr. of Computer Systems Analysis & Programming	416	399	4.3
Lead Computer Systems Analyst & Programmer	375	360	4.2
Senior Computer Systems Analyst & Programmer	337	326	3.4
Junior Computer Systems Analyst & Programmer	286	274	4.4
Mgr./Supvr. of Computer Systems Analysis	435	433	0.5
Lead Computer Systems Analyst	385	384	0.3
Senior Computer Systems Analyst	358	339	5.6
Junior Computer Systems Analyst	309	276	12.0
Mgr./Supvr. of Programming	379	378	0.3
Lead Programmer	325	321	1.2
Senior Programmer	304	282	7.8
Junior Programmer	251	231	8.7
Programmer Trainee	199	192	3.6
Data Communications Mgr.	385	380	1.3
Data Communications Operator	203	196	3.6
Mgr./Supvr. of Computer Operations	320	333	(-3.9)
Lead Computer Operator	235	230	2.2
Senior Computer Operator	214	206	3.9
Junior Computer Operator	179	175	2.3
Computer I/O Control Manager	218	215	1.4
Tape Librarian	178	170	4.7
Key Entry Supervisor	206	201	2.5
Lead Key Entry Operator	174	169	3.0
Senior Key Entry Operator	160	154	3.9
Junior Key Entry Operator	145	139	4.3

* Not included in 1976.

SOURCE: Hitcock Publishing Company, Infosystems, June 1977.

TABLE 72

AVERAGE WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY JOB DESCRIPTION AND GEOGRAPHIC AREA, 1977

JOB DESCRIPTION	GEOGRAPHIC AREA								
	New England	Middle Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific
Manager of Data Processing	$473	$461	$444	$433	$454	$420	$447	$456	$454
Asst. Mgr. of Data Processing	443	384	432	373	440	444	381	401	414
Project/Team Leader	564	427	382	402	434	400	351	397	437
Mgr/Supvr. of Computer Systems Analysis & Programming	487	425	436	396	397	400	380	418	430
Lead Computer Systems Analyst & Programmer	429	376	437	345	341	330	347	340	403
Senior Computer System Analyst & Programmer	391	346	348	312	422	294	329	311	360
Junior Computer Systems Analyst & Programmer	381	270	277	253	273	238	264	274	312
Mgr/Supvr. of Computer Systems Analysis	489	432	392	443	361	374	454	441	512
Lead Computer Systems Analyst	411	406	376	379	346	366	339	395	413
Senior Computer Systems Analyst	356	391	372	353	316	335	359	330	391
Junior Computer Systems Analyst	275	279	328	296	229	298	277	291	362
Mgr/Supvr. of Programming	428	394	320	393	355	355	393	393	404
Lead Programmer	347	305	324	329	292	291	337	308	384
Senior Programmer	358	309	300	288	258	282	313	286	327
Junior Programmer	295	244	263	236	210	232	265	234	277
Programmer Trainee	252	193	186	190	176	185	209	198	213
Data Communications Mgr.	432	380	366	448	*	338	375	353	382
Data Communications Operations	259	167	183	221	173	201	229	160	221
Mgr/Supvr. of Computer Operations	418	319	320	314	308	305	303	310	336
Lead Computer Operator	230	229	244	235	252	212	225	245	258
Senior Computer Operator	203	204	228	210	192	201	199	212	236
Junior Computer Operator	173	173	188	175	191	161	168	183	197
Computer I/O Control Mgr.	234	232	193	223	263	196	194	214	236
Tape Librarian	190	188	182	180	156	150	171	159	191
Key-Entry Supervisor	221	215	206	212	200	189	186	188	220
Lead Key Entry Operator	174	181	170	171	176	160	171	172	190
Senior Key Entry Operator	164	162	160	162	137	151	153	147	175
Junior Key Entry Operator	141	143	154	140	130	148	137	137	159

*Insufficient Data.

SOURCE: U.S. Department of HEW, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, 1975.

TABLE 73

AVERAGE ANNUAL SALARIES FOR SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES BY STATE, 1975

STATE	POSITION					
	Laboratory Aide I	Laboratory Technician I	Micro-biologist I	Chemist I	Asst. Lab. Director	Lab. Director
Alabama	$ 5,486	$ 6,949	$10,407	*	$19,884	$23,959
Alaska	10,830	12,162	16,908	*	*	38,484
Arizona	6,313	8,973	11,768	$11,768	19,851	23,794
Arkansas	5,584	7,482	9,783	*	17,225	22,438
California	7,844	9,907	9,926	11,217	25,043	34,322
Colorado	5,688	6,911	11,004	11,004	*	25,242
Connecticut	6,561	7,266	8,958	8,958	22,210	26,056
Delaware	6,783	7,717	11,771	11,771	*	27,883
D. C.	7,965	11,642	11,642	13,466	28,911	34,555
Florida	5,359	6,152	10,276	10,276	18,284	21,447
Georgia	5,898	6,996	9,948	9,948	18,900	22,800
Hawaii	6,918	8,418	10,734	11,274	*	22,332
Idaho	6,408	6,906	11,496	11,496	20,502	24,898
Illinois	7,146	8,532	12,414	12,414	*	31,140
Indiana	*	6,851	11,713	11,713	22,100	35,438
Iowa	5,544	7,608	9,850	9,850	22,300	25,618
Kansas	*	5,766	10,950	10,950	21,414	24,738
Kentucky	6,162	7,002	9,846	10,860	*	35,548
Louisiana	6,552	8,016	12,336	11,532	16,998	35,040
Maine	6,058	7,176	9,412	9,412	17,498	20,098
Maryland	6,439	7,781	10,934	10,934	24,937	38,058
Massachusetts	6,526	8,461	10,699	10,699	26,572	28,824
Michigan	7,444	9,469	11,140	11,140	30,193	37,230
Minnesota	7,141	7,945	11,662	11,662	*	29,452
Mississippi	4,560	6,396	10,410	10,410	*	21,648
Missouri	5,490	8,106	10,152	10,152	17,106	20,712
Montana	6,213	9,874	11,883	11,883	*	21,681
Nebraska	5,766	7,512	10,578	10,578	18,090	21,702
Nevada	6,678	*	9,915	11,127	14,967	21,342
New Hampshire	5,791	7,988	8,711	*	*	17,249
New Jersey	6,003	8,870	9,877	9,877	*	30,041
New Mexico	5,700	7,140	9,360	9,360	17,820	23,550
New York	5,870	8,775	11,614	11,614	*	50,600
North Carolina	5,568	7,974	11,490	10,476	18,450	23,484
North Dakota	5,460	7,302	11,886	11,886	18,450	21,354
Ohio	6,968	7,852	10,047	10,047	20,509	24,396
Oklahoma	6,480	7,470	11,550	11,040	21,720	24,870
Oregon	6,618	8,610	*	*	16,950	22,746
Pennsylvania	6,925	9,086	12,558	12,558	22,122	25,526
Rhode Island	6,006	7,605	9,776	*	13,841	22,031
South Carolina	5,440	6,479	10,993	10,993	18,564	34,861
South Dakota	5,354	6,918	10,753	10,753	*	17,823
Tennessee	5,052	6,420	10,098	10,098	17,556	21,354
Texas	5,562	7,740	10,764	10,764	21,250	24,250
Utah	6,090	7,458	11,802	11,802	25,050	28,038
Vermont	5,525	7,605	10,062	10,062	14,612	21,008
Virginia	4,980	6,492	9,696	*	16,964	19,775
Washington	6,252	6,870	9,570	*	28,872	23,298
West Virginia	5,460	*	8,820	8,820	13,260	14,670
Wisconsin	8,086	7,845	11,466	11,466	24,000	30,000
Wyoming	*	9,570	*	*	*	19,710
Guam	5,126	5,780	8,434	*	*	13,663
Puerto Rico	3,480	4,020	8,600	6,600	17,100	18,300
Virgin Islands	4,242	*	8,353	*	*	13,921

*No Position Reported

SOURCE: U.S. Department of HEW, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, 1975.

TABLE 74

AVERAGE ANNUAL SALARIES OF SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES, 1972 AND 1975

Position Classification	Average Annual Salaries		Percent Increase
	1972	1975	1972-1975
Lab Aide I	$ 4,922	$ 6,145	24.8
Lab Aide II	5,668	7,034	24.1
Lab Technician I	6,368	7,762	21.9
Lab Technician II	7,664	8,940	16.6
Microbiologist I	8,955	10,631	18.7
Microbiologist II	10,252	12,212	19.1
Microbiologist III	11,901	14,260	19.8
Microbiologist IV	14,251	16,868	18.4
Microbiologist V	15,686	18,827	20.0
Chemist I	9,361	10,807	15.4
Chemist II	10,729	12,479	16.3
Chemist III	12,261	14,395	17.4
Chemist IV	14,709	17,096	16.2
Chemist V	16,749	20,221	20.7
Asst. Lab Director	16,842	20,265	20.3
Lab Director	20,406	25,139	23.2

SALARIES OF ENGINEERS

The *Engineering Manpower Commission's* 12th biennial survey of engineers' salaries, *PROFESSIONAL INCOME OF ENGINEERS, 1976*, includes data from 903 employers covering 162,868 positions in industry, government and education. The "average engineer" in 1976 was making an annual salary of $23,400. The median figure for the survey, however, was only $22,350, indicating an upward-skewed distribution of salaries. A relatively small number of high earners bring the average up.

The median engineer, typically a male who obtained his bachelor's degree about 15 years ago and is therefore about 37 years old, is significantly affected by whether he is in supervisory or non-supervisory status. Supervisors make more money and have more responsibility than non-supervisors.

By type of industry, the petroleum industry tended to pay the highest salaries, followed by the chemical and electronic equipment industries (Table 75).

By employment group, those engineers working in research and development had the highest median salaries - $25,650 - followed by those in the petroleum and aerospace industries. State governments paid engineers the least (Tables 76 and 77).

By geographic region, there is a spread of about 14-17 percent between the Pacific states and the South Atlantic group, with engineers in the Pacific area having median salaries of $23,300 and those in the South Atlantic states, $19,900. However, it is important to note that the South Atlantic region also has the highest concentration of young engineers, thus the lower median salaries (Tables 78 and 80).

On the average, an advanced degree also confers a consistent salary advantage throughout the engineering career (Table 79).

Despite steady increases in current salary, the real value of engineers' salaries has tended to decrease since 1968, and the typical median engineer has barely kept up with inflation. Chart 8 shows salary ranges for selected years with dotted lines indicating salary levels for the typical engineer who entered the field in 1953, 1958 and 1964.

The 12th biennial survey of the *National Society of Professional Engineers - PROFESSIONAL ENGINEERS' INCOME AND SALARY SURVEY* - found that the median income of professional engineers was $23,700 in 1975, a 15% increase from the 1973 median income. This increase failed to keep pace with the 21% rise in the cost of living, resulting in a 5% loss in purchasing power during the two-year period.

Only 13% of the engineers in the 1975 NSPE survey were self-employed. Self-employment is seldom chosen by engineers who have been in the profession for less than ten years. Civil and sanitary engineering are the two specialties where self-employment is most frequent and by far the largest proportion of self-employed engineers own consulting firms. Self-employed engineers have median income earnings almost $10,000 higher than those of salaried engineers ($32,570 vs $22,860 - Table 81).

By field of employment, median income was highest for those engineers working in construction-contractor firms and lowest for those in state governments. Younger engineers make higher salaries working in the federal government and in construction-contracting firms while experienced engineers working in consulting firms and construction-contracting firms earn the most. Salaries paid by the federal government are consistently good with the earnings of educators slightly behind (Tables 82, 84 and 89).

The type of work performed by engineers also exerts considerable influence on earnings. As in previous surveys, those in executive-administrative positions had the highest earnings, followed by those doing consulting work. The gap between executives and consultants and those in all other occupations increased with the level of experience of salaried engineers (Tables 83 and 90).

Three branches of engineering - chemical, aeronautical and aerospace and the heterogeneous "other" category which includes many engineers in executive-administrative positions - rank highest with respect to income. In 1975, these fields together with the small petroleum and mining field outrank all others. Agricultural engineering stands in the lowest position, as it has in past surveys (Tables 85 and 87).

Tables 86 and 91 show a steady earning progression with higher levels of education which is even more evident when years of experience are taken into account.

In 1975, engineers tended to concentrate in the Middle Atlantic and New England and the Midwest regions, and earned the highest salaries in the Middle Atlantic and New England areas (Table 88).

Of the 17,475 NSPE members responding to the "moonlighting income" question, 82% reported all of their income as coming from their principal employer, while an additional 13% earned less than 10% from outside sources.

- The 13th biennial salary survey conducted by the *American Society of Civil Engineers* reports that the average of median entrance salaries (all grades combined) paid in the five major employment categories (excluding education) has increased by 19.9% between 1973 and 1975. The largest increase occurred in the municipal category, 25.5%, followed closely by the railroads, utilities and industries category at 22.4%. The lowest increase in 1975, 15.0%, was recorded by state departments and agencies (Table 95).

Those civil engineers working in education in the west had the highest median entrance salaries - $21,022, followed by those working in contracting firms in the south - $19,501. Civil engineers working in railroads, utilities and industries in the Middle Atlantic region had the highest maximum median salaries (Table 92).

For breakdowns by ASCE grades and equivalent federal GS-grades by class of employment see tables 93 and 94.

- The average manufacturing engineer received a total compensation of approximately $19,100 during the 12-month period from March 1, 1975 through February 29, 1976, according to *COMPENSATION IN MANUFACTURING: PART 1: MANUFACTURING ENGINEERS*, the report of a survey conducted by *Abbott, Langer and Associates* and sponsored by the *Society of Manufacturing Engineers*.

By type of employer, highest median annual incomes were enjoyed by those in the field of transportation equipment ($20,000). The lowest median incomes were received by those engineers in the manufacture of machinery (except electrical), $16,800; fabricated metals, $16,900; and instruments and related products, $17,000 (Table 96).

As in all other salary studies, the income of manufacturing engineers varied according to the degree level. Those who had not attended college had median annual incomes of $17,500, those with some college, $17,192, while those with an engineering technician degree averaged $17,729. Bachelor's degree graduates in engineering had median incomes of $19,561, while holders of master's degrees had average incomes of $20,892 (Table 97). However, the total range from those with no college to those with

a Ph.D. is only $5,000 per year.

Increasing experience in manufacturing engineering resulted in small, but fairly regular increases in compensation. The average income of manufacturing engineers with five years of experience was $14,150, while that of those with 25 to 29 years of experience was $20,500 (Table 98).

The maximum difference in median earnings between geographic areas was 18%. Median incomes were highest in Michigan ($20,000), New York and New Jersey ($19,694), and California ($19,130). Lowest median earnings were found in Illinois and Wisconsin ($17,000) and the Southeastern states ($17,001) (Table 99).

One of the significant factors in compensation for manufacturing engineers was job function. The highest median income was reported by research and development engineers ($21,230), followed by technical sales engineers $20,001). The lowest median income was received by methods and systems engineers, $16,484 (Table 100).

- Average compensation for industrial engineers during the 12-month period from January 1, 1976 through December 31, 1976 was $24,190, according to a survey conducted by *Abbott, Langer and Associates* for the *American Institute of Industrial Engineers*. This represented an increase of about 11.3% during the 20-month period since the preceeding survey, increasing faster than the cost-of-living index (which rose approximately 9.9% during that period).

Industrial engineers showed a wider salary range by level of degree than manufacturing engineers. Those with less than a bachelor's degree had median incomes of $19,180, while those with a bachelor's degree had a median annual income of over $21,000. Holders of the MBA degree received a median annual compensation of $24,200, and the median for Ph.D.'s was $27,000 (Table 101).

Total income of industrial engineers rose with fair regularity by length of experience, and again showed a wider range than for manufacturing engineers. A median income of $14,401 for those with under two years of experience rose to $28,000 for those with 30 years of experience and over (Table 102).

Median incomes by geographic area ranged from $20,715 in the Plains states to $23,580 in the Pacific states. Survey respondents of Canada had a median total compensation of $21,001 (Table 103).

Median total compensation varied considerably from one type of employer to another. The lowest average incomes were found in insurance companies ($18,689) and textile mill firms ($20,699). Industrial engineers working in consulting firms and communications organizations had the highest average salaries ($32,317), followed by those in merchandising ($25,510). The medians are somewhat different (Table 104).

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1976

TABLE 75

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF INDUSTRY AND SELECTED YEARS SINCE BACCALAUREATE, 1976

TYPE OF INDUSTRY	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Aerospace	(19) $13,350	(73) $14,000	(117) $16,650	(190) $18,050	(688) $20,200	(1,026) $24,250	(1,119) $25,900	(866) $27,150	(787) $28,450	(412) $28,100
Chemicals	(124) 14,400	(564) 15,200	(747) 18,350	(1,057) 19,900	(2,427) 22,100	(1,761) 25,750	(1,583) 27,100	(1,218) 28,100	(1,783) 29,400	(1,570) 30,190
Construction	(68) 13,500	(307) 14,350	(282) 17,750	(266) 19,300	(630) 21,400	(453) 24,400	(347) 25,400	(350) 26,050	(374) 26,800	(269) 27,100
Electrical Equipment	(252) 12,900	(561) 13,700	(1,333) 17,050	(2,053) 18,850	(5,512) 21,400	(5,330) 25,450	(4,743) 26,650	(3,814) 27,250	(4,797) 27,300	(3,118) 26,200
Electronic Equipment	(1,014) 14,650	(760) 15,450	(1,330) 18,750	(1,986) 20,250	(4,402) 22,250	(3,898) 24,900	(2,747) 25,600	(1,663) 26,000	(1,210) 26,250	(748) 26,200
Instruments	(7) 12,900	(38) 13,700	(38) 16,850	(65) 18,350	(148) 20,400	(142) 23,150	(96) 23,850	(50) 24,250	(77) 24,450	(46) 24,300
Machinery	(36) 13,200	(107) 14,000	(122) 17,400	(143) 19,150	(409) 21,700	(359) 25,650	(296) 26,750	(274) 27,200	(324) 26,900	(250) 25,300
Metals, Basic	(13) 14,100	(75) 14,900	(74) 18,000	(129) 19,450	(246) 21,400	(158) 24,250	(139) 25,100	(170) 25,650	(183) 26,250	(159) 26,450
Metal Products, Fabricated	(47) 12,850	(269) 13,500	(308) 16,300	(307) 17,700	(824) 19,650	(515) 22,650	(482) 23,550	(424) 24,050	(402) 24,200	(286) 23,550
Mining	(1) 0	(25) 15,650	(20) 17,950	(17) 19,050	(46) 20,600	(35) 23,100	(42) 24,100	(41) 24,850	(50) 25,900	(35) 26,600
Paper & Wood Product	(4) 0	(23) 15,100	(33) 18,200	(29) 19,700	(101) 21,700	(138) 24,650	(87) 25,600	(67) 26,250	(93) 26,900	(89) 27,200
Petroleum	(61) 15,050	(357) 15,900	(273) 19,350	(278) 21,000	(568) 23,350	(548) 27,150	(558) 28,500	(489) 29,500	(897) 30,750	(630) 31,450
Food	(5) 12,950	(13) 13,850	(8) 17,400	(13) 19,000	(14) 21,000	(33) 23,550	(35) 24,200	(14) 24,600	(31) 24,950	(31) 25,050
Consulting & Engineering Services	(89) 13,650	(551) 14,400	(599) 17,450	(545) 18,850	(1,293) 20,850	(909) 23,850	(853) 24,950	(739) 25,700	(790) 26,600	(651) 27,000

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1976

TABLE 76

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SELECTED YEARS SINCE BACCALAUREATE, 1976

TYPE OF EMPLOYMENT	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Industry	(1,051) $13,600	(3,118) $14,400	(4,546) $17,700	(5,582) $19,350	(13,225) $21,600	(11,687) $25,150	(9,991) $26,300	(8,113) $27,150	(10,214) $28,050	(7,396) $28,500
All Manufacturing Industries	(663) 13,900	(1,691) 14,650	(2,544) 17,700	(3,619) 19,250	(9,007) 21,500	(8,319) 25,150	(7,054) 26,450	(5,844) 27,350	(7,195) 28,250	(5,225) 28,550
All Non-Manufacturing Industries	(388) 13,250	(1,427) 14,150	(2,002) 17,800	(1,963) 19,500	(4,218) 21,800	(3,368) 25,100	(2,937) 26,100	(2,269) 26,800	(3,019) 27,600	(2,171) 27,900
Federal Government	(25) 12,550	(124) 13,350	(263) 16,400	(307) 17,800	(733) 19,700	(684) 22,600	(575) 23,550	(527) 24,200	(476) 25,000	(305) 25,300
State Government	(71) 11,700	(166) 12,300	(267) 14,750	(336) 15,900	(570) 17,550	(692) 20,000	(585) 20,700	(388) 21,100	(490) 21,150	(371) 20,600
Local Government	(4) 14,400	(29) 15,100	(76) 17,300	(68) 18,750	(185) 20,850	(189) 24,000	(190) 24,900	(176) 25,350	(206) 25,150	(167) 23,750
All Educational Institutions All Faculty, 9 mo. Contract	(1) 13,350	(5) 13,750	(64) 15,000	(153) 15,900	(810) 17,200	(1,154) 19,750	(1,187) 20,850	(928) 21,800	(818) 23,050	(1,069) 22,950
All Schools, Administrators 12 mo. Contract	(0) 0	(0) 0	(3) 0	(6) 17,850	(14) 21,400	(61) 27,350	(78) 29,350	(110) 30,650	(100) 31,850	(117) 32,300
All Schools, Researchers 12 mo. Contract	(0) 0	(0) 0	(23) 14,150	(39) 15,550	(121) 17,400	(75) 20,000	(57) 20,800	(56) 21,300	(39) 21,800	(35) 22,000
Research and Development	(58) 14,200	(139) 15,150	(335) 19,100	(537) 21,050	(1,554) 23,700	(1,626) 27,600	(1,379) 28,700	(950) 29,350	(1,001) 29,800	(566) 29,800
Communications	(9) 14,250	(7) 15,150	(46) 18,800	(37) 20,500	(51) 22,900	(40) 26,500	(70) 27,700	(62) 28,600	(103) 29,650	(67) 30,100
Electric Utilities	(207) 13,400	(510) 14,200	(975) 17,500	(811) 19,050	(1,425) 21,200	(1,032) 24,400	(906) 25,500	(667) 26,250	(1,279) 27,150	(913) 27,550
Gas Utilities & Pipelines	(5) 13,250	(80) 14,250	(50) 18,150	(64) 19,900	(84) 22,150	(77) 25,150	(88) 26,050	(64) 26,600	(125) 27,150	(49) 27,350

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1976

TABLE 77

MEDIAN AND MEAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP, 1976

EMPLOYMENT GROUP	MEDIAN	MEAN
Research and Development	$25,650	$26,500
Petroleum	25,250	26,100
Aerospace	24,600	25,000
Chemicals	23,400	24,650
Electrical & Electronic Equipment	22,850	23,800
Local Government	22,200	22,900
Federal Government	21,400	21,600
Construction & Mining	21,150	21,950
Utilities	21,050	22,450
Consulting & Engineering Services	20,750	22,000
Mechanical Equipment	20,600	21,900
All Education*	20,600	21,550
Metal Industries	20,450	21,400
State Government	18,200	18,500

* Mostly 9-month basis.

TABLE 78

MEDIAN AND MEAN SALARIES OF ENGINEERS IN INDUSTRY AND GOVERNMENT BY GEOGRAPHICAL REGION, 1976

GEOGRAPHICAL REGION	MEDIAN	MEAN
Pacific	$23,300	$24,150
Middle Atlantic	23,100	24,250
Mountain	22,100	22,950
New England	22,050	22,850
East North Central	21,500	22,550
West North Central	21,450	22,200
South Central	21,350	22,500
South Atlantic	19,900	21,100

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1976

TABLE 79

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY HIGHEST DEGREE HELD AND SELECTED YEARS SINCE BACCALAUREATE, 1976
(WEIGHTED NATIONAL AVERAGE)

HIGHEST DEGREE HELD	YEARS SINCE BACCALAUREATE								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Bachelor's	(10,020) $14,300	(10,968) $17,100	(12,684) $18,450	(27,354) $20,400	(24,800) $23,450	(23,228) $24,550	(20,009) $25,350	(24,154) $26,300	(17,992) $26,750
Master's	(907) 15,600	(3,573) 18,500	(4,502) 19,950	(12,589) 22,150	(10,002) 25,900	(7,695) 27,250	(5,405) 28,250	(4,916) 29,200	(2,911) 29,000
Ph.D.'s	(8) 19,950	(395) 22,150	(760) 23,300	(3,687) 25,100	(3,492) 28,600	(2,493) 30,150	(1,649) 31,550	(1,107) 33,300	(787) 32,200
All Engineers	(10,936) 14,400	(14,964) 17,500	(17,989) 19,050	(43,772) 21,200	(38,471) 24,500	(33,492) 25,550	(27,137) 26,300	(30,233) 27,000	(21,750) 27,250

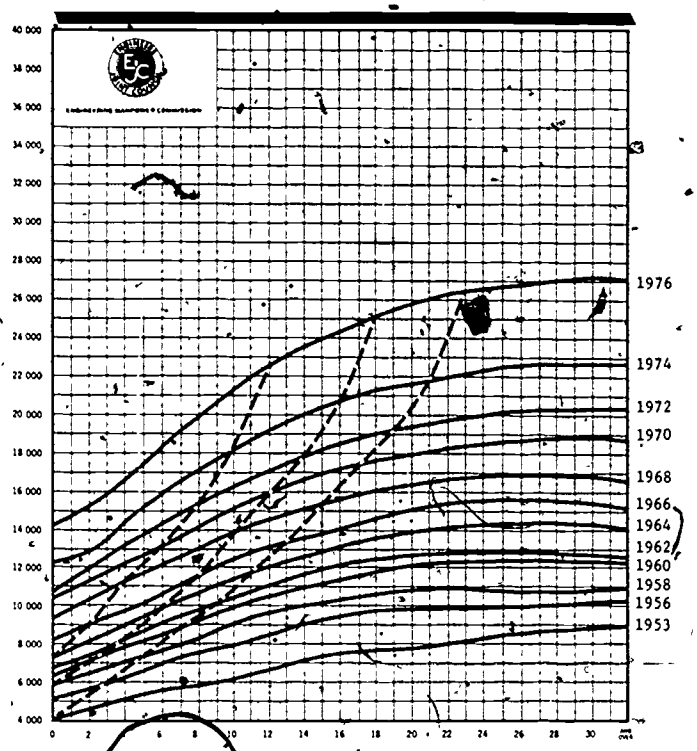
TABLE 80

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE BACCALAUREATE, 1976

Geographic Area	YEARS SINCE BACCALAUREATE								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
New England	(63) 13,700	(125) 16,700	(162) 18,300	(379) 20,750	(377) 24,900	(349) 26,150	(256) 26,800	(286) 26,250	(248) 22,850
Middle Atlantic	(381) 14,200	(710) 17,850	(1,000) 19,600	(2,373) 22,050	(2,328) 25,600	(1,948) 26,650	(1,530) 27,400	(1,646) 28,100	(1,321) 28,400
East North Central	(650) 14,400	(832) 17,600	(893) 19,050	(2,118) 20,900	(1,628) 23,500	(1,503) 24,350	(1,291) 24,900	(1,702) 25,500	(1,372) 25,750
West North Central	(322) 14,100	(346) 16,950	(426) 18,350	(1,018) 20,400	(918) 23,650	(926) 24,750	(523) 25,450	(738) 25,950	(387) 25,700
South Central	(242) 14,050	(430) 17,100	(404) 18,550	(739) 20,400	(555) 23,100	(470) 24,000	(337) 24,650	(405) 25,300	(317) 25,600
South Atlantic	(554) 15,050	(766) 17,600	(700) 18,850	(1,380) 20,650	(1,237) 23,600	(1,028) 24,750	(812) 25,650	(1,176) 26,900	(790) 27,700
Mountain	(75) 14,250	(122) 17,450	(106) 19,000	(295) 21,100	(279) 23,950	(311) 24,650	(194) 24,900	(251) 24,700	(149) 23,950
Pacific Coast	(318) 15,200	(399) 18,650	(419) 20,250	(1,176) 22,500	(1,083) 25,900	(919) 27,050	(711) 27,850	(830) 28,800	(456) 29,200

72 SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1976

CHART 8 - TRENDS IN MEDIAN SALARIES OF ENGINEERS, 1953-1976



The dotted lines show hypothetical median engineers who entered the field in 1953, 1958 and 1964, and their salary levels in 1976.

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1975.

TABLE 81

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY EMPLOYMENT STATUS AND YEAR OF ENTRY INTO PROFESSION, 1975

Year of Entry	Self-Employed	Employee
1975	$	$12,970
1974		13,510
1973		14,370
1972		15,160
1971		16,240
1970		17,410
1969	20,250	18,400
1967-68	23,400	19,140
1965-66	25,500	20,720
1963-64	27,110	22,370
1961-62	28,590	23,170
1959-60	28,980	23,690
1957-58	33,630	24,570
1955-56	33,530	25,070
1953-54	33,900	25,490
1951-52	35,080	26,250
1949-50	37,980	27,180
1944-48	36,900	27,380
1939-43	39,220	27,920
1934-38	38,820	28,260
1929-33	33,670	26,400
1928 and before	31,430	21,750

*Fewer than 20 cases

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1975.

TABLE 82

MEDIAN INCOME OF PROFESSIONAL ENGINEERS ACCORDING TO FIELD OF EMPLOYMENT AND YEAR OF ENTRY INTO PROFESSION, 1975

Year of Entry	Industry	Public Utilities	Federal Government	State Government	County or Municipal Government	Consulting Firm	Construction-Contractor Firm	Educational Institution	Other Nonprofit Organization
1975	$13,540	$ *	$ *	$ *	$ *	$ *	$ *	$ *	$ *
1974	13,910	13,630	12,640	12,430	13,330	13,500	14,100	*	*
1973	14,950	14,700	14,000	*	13,500	13,900	14,890	*	*
1972	15,410	15,390	15,100	14,100	15,190	14,930	16,500	*	*
1971	16,860	16,690	16,400	14,900	15,690	16,120	17,000	*	*
1970	17,960	17,630	18,630	15,670	17,000	16,940	19,580	*	*
1969	18,750	18,420	18,790	15,800	18,160	18,240	19,800	*	*
1967-68	19,500	18,900	19,610	17,390	19,080	18,800	21,320	*	*
1965-66	21,120	20,320	20,730	18,580	20,220	21,300	23,480	19,950	*
1963-64	22,150	22,440	22,660	19,430	21,700	23,680	26,130	22,130	*
1961-62	23,540	23,130	24,130	20,320	21,840	24,490	27,300	24,300	*
1959-60	23,940	24,120	24,490	20,960	22,450	26,000	27,130	23,440	*
1957-58	25,280	24,240	25,210	21,530	23,760	27,260	26,890	24,750	24,000
1955-56	25,090	24,720	26,640	21,960	25,690	27,220	26,650	25,040	*
1953-54	26,200	24,270	26,320	22,640	24,350	28,650	33,140	27,190	*
1951-52	27,180	26,080	26,470	22,600	25,320	29,180	29,570	27,900	27,220
1949-50	27,890	27,670	28,110	24,280	25,250	30,260	32,410	27,000	24,000
1944-48	28,240	27,630	29,110	24,500	23,520	31,240	36,840	28,740	24,750
1939-43	28,450	29,250	28,600	23,220	23,900	33,550	36,790	27,960	27,860
1934-38	29,470	29,630	29,040	23,170	24,940	30,780	36,430	27,860	*
1929-33	29,250	*	29,400	25,290	25,130	27,330	30,670	27,750	*
1928 and before	27,000	*	*	*	*	27,750	*	*	*

*Fewer than 20 cases

TABLE 83

MEDIAN INCOME OF PROFESSIONAL ENGINEERS ACCORDING TO TYPE OF WORK AND YEAR OF ENTRY INTO PROFESSION, 1975

Year of Entry	Executive-Administrative	Sales	Teaching	Design	Production Quality Control, Maintenance	Research & Development	Construction Supervision	Consulting	Other
1975	$ *	$ *	$ ---	$12,560	$13,330	$ *	$ *	$ *	$ *
1974	15,330	*	*	13,510	13,450	13,380	13,630	13,420	*
1973	13,900	*	*	14,280	14,970	13,960	14,130	14,240	*
1972	17,110	*	*	14,960	15,310	15,170	15,200	15,000	*
1971	17,460	*	*	15,880	16,500	16,000	15,830	16,840	*
1970	19,180	*	*	16,820	18,150	17,330	18,060	17,370	*
1969	19,680	*	*	17,640	19,090	18,710	17,810	19,360	*
1967-68	21,320	19,390	*	18,250	19,390	19,180	19,540	19,210	19,330
1965-66	22,470	21,000	20,330	19,730	20,380	21,610	21,200	21,850	20,790
1963-64	24,520	25,000	21,000	21,100	21,060	21,670	22,880	23,670	19,720
1961-62	26,020	24,000	22,200	21,460	21,200	23,170	22,500	24,060	24,860
1959-60	26,320	27,000	21,500	21,380	22,450	24,070	22,080	25,770	*
1957-58	27,000	28,880	23,550	22,660	23,200	25,790	22,900	26,130	25,720
1955-56	28,060	27,000	24,000	22,970	23,100	25,420	23,700	26,740	*
1953-54	28,200	28,500	22,880	23,370	23,250	25,970	25,000	28,390	*
1951-52	29,560	26,250	24,000	23,520	24,180	26,540	24,670	28,420	25,130
1949-50	30,190	28,230	24,000	24,590	24,220	25,920	25,750	29,440	26,250
1944-48	31,960	28,000	26,590	23,580	22,970	26,440	24,860	29,130	25,500
1939-43	31,750	30,910	26,400	24,570	22,980	26,840	26,570	29,890	*
1934-38	35,140	*	25,580	24,220	25,500	27,750	24,500	28,160	*
1929-33	29,630	*	*	23,060	*	*	*	26,140	*
1928 and before	47,000	*	*	*	*	*	*	24,000	*

*Fewer than 20 cases

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1975.

TABLE 84

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY FIELD OF EMPLOYMENT AND YEARS OF EXPERIENCE, 1975

FIELD OF EMPLOYMENT	Engineers With 5 Years of Experience	Engineers With 10 Years of Experience	Engineers With 20 Years of Experience
Industry	$17,960	$21,120	$25,090
Public Utilities	17,630	20,320	24,720
Federal Government	18,630	20,730	26,640
State Government	15,670	18,580	21,960
County Government	17,000	20,220	25,690
Consulting Firm	16,940	21,300	27,220
Construction-Contractor Firm	19,580	23,480	26,650
Educational Institution	*	19,950	25,040
Other Nonprofit Organization	*	*	*

* Fewer than twenty cases.

TABLE 85

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING, 1971-1975

BRANCH OF ENGINEERING	MEDIAN INCOME			PERCENT INCREASE	
	1971	1973	1975	1971-73	1973-75
Aeronautical and Aerospace	$19,210	$21,720	$25,360	13%	18%
Agricultural	16,600	19,980	22,690	20	14
Chemical	19,110	21,590	26,010	11	20
Civil	17,860	20,410	23,260	14	14
Electrical & Electronic	18,150	20,330	23,340	12	15
Industrial	18,520	20,800	24,100	12	16
Mechanical	18,860	20,320	23,580	14	16
Sanitary	19,110	20,630	23,090	11	12
Other	20,360	22,930	26,330	13	15

TABLE 86

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION, 1971-1975

LEVEL OF EDUCATION	MEDIAN INCOME			PERCENT INCREASE	
	1971	1973	1975	1971-73	1973-75
Less than Bachelor's	$17,080	$19,770	$22,770	16%	15%
Bachelor's Degree	17,920	20,420	23,290	14	14
Master's Degree	19,030	20,950	24,280	10	16
Doctor's Degree	22,510	24,840	27,790	10	12

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1975.

TABLE 87

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING AND YEAR OF ENTRY INTO PROFESSION, 1975

Year of Entry	Aeronautical & Aerospace	Agricultural	Chemical	Civil	Electrical & Electronic	Industrial	Mechanical	Metallurgical & Materials	Petroleum & Mining	Sanitary	Other
1975	$	$	$	$12,000	$13,100	$	$	$	$	$	$
1974				13,260	13,540		13,810			13,170	
1973				13,820	14,650	14,580	14,530			14,000	
1972			16,830	14,920	15,310		14,930			15,210	
1971			15,740	16,570	16,430	16,500			16,750		
1970			18,000	17,030	17,690	19,000	17 550			17,350	
1969				17,910	19,160	18,900	18,400			18,500	
1967-68			19,670	18 740	19,500	20,000	19,230			19,950	19,850
1965-66			22,880	20,730	20,650	20,580	21,180			21,090	23,250
1963-64			23,670	22,740	22,440	22,650	21,960			23,500	23,880
1961-62			24,380	23,310	24,290	25,500	23,400			24,120	24,350
1959-60	24,300		26,400	24,050	23,970	24,350	23,340			25,950	24,940
1957-58	27 270		27 640	24,970	24,480	25,850	24,960			25,820	27,550
1955-56	26 400		26,500	26,010	24,360	24,380	25,630			27,630	25,720
1953-54	27 670		28,070	26,550	25,680	27,600	25,660		29,000	26,060	24,940
1951-52	25 880		27,940	26 960	27 150	27,680	26,460		27,000	31,200	27,300
1949-50	28,500	25,830	28 130	28 360	27 180	27 810	27,360	30,000	31 000	31,000	30,000
1944-48	29 790		33,270	27 750	28,440	28,500	27,970	26,000	32 800	29,630	29,830
1939-43	28 500		30,840	28,420	28,530	28 750	28,130	28,500	33,330	28 630	33,080
1934-38			32,800	28,400	29 320	29,400	28,690			27,000	33,600
1929-33		---		26,130	24,000		27,830				
1928 and before		---		25,070							

*Fewer than 20 respondents

TABLE 88

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY REGION, 1971-1975

REGION	MEDIAN INCOME			% INCREASE	
	1971	1973	1975	1971-73	1973-75
New England & Middle Atlantic	$19,750	$22,530	$25,540	14%	13%
South*	18,310	21,290	23,540	16	11
Midwest	17,880	20,090	23,010	12	15
Plains	16,810	18,990	21,900	13	15
Southwest**	17,330	19,730	22,790	14	16
West***	18,460	20,750	23,920	12	15

* Includes Puerto Rico. ** Includes Canal Zone. *** Includes Alaska and Hawaii

TABLE 89

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY FIELD OF EMPLOYMENT, 1971-1975

FIELD OF EMPLOYMENT	MEDIAN INCOME			% INCREASE	
	1971	1973	1975	1971-73	1973-75
Industry	$17,870	$20,330	$23,810	14%	17%
Public Utilities	17,410	19,780	22,670	14	15
Federal Government	19,180	21,930	24,700	14	13
State Government	16,120	18,130	20,730	12	14
County or Municipal Government	16,960	18,990	21,680	12	14
Consulting Firm	19,260	22,010	24,420	14	11
Construction-Contractor Firm	21,040	24,220	26,530	15	10
Educational Institution	19,560	22,070	25,950	13	18

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1975.

TABLE 90

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY TYPE OF WORK PERFORMED, 1971-1975

TYPE OF WORK	MEDIAN INCOME			PERCENT INCREASE	
	1971	1973	1975	1971-73	1973-75
Executive-Administrative	$21,540	$25,220	$28,250	17%	12%
Sales	17,490	21,020	25,110	20	19
Teaching	17,610	19,940	23,500	13	18
Design	15,580	17,290	19,820	11	15
Production, Quality Control, Maintenance, etc.	15,650	17,780	20,270	14	14
Research and Development	17,520	20,210	23,330	15	15
Construction Supervision	16,130	18,070	20,960	12	16
Consulting	19,700	22,180	24,620	13	11
Other	17,060	18,310	21,810	7	19

TABLE 91

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION AND YEAR OF ENTRY INTO PROFESSION, 1975

Year of Entry	Less Than Bachelor's Degree	Bachelor's Degree	Master's Degree	Doctor's Degree
1975	$ *	$12,770	$ *	$ ---
1974	*	13,440	14,600	*
1973	*	14,360	14,500	*
1972	*	15,070	15,520	*
1971	*	16,100	16,850	*
1970	*	17,360	17,460	*
1969	*	18,260	18,930	*
1967-68	17,670	19,010	19,770	20,720
1965-66	19,500	20,520	21,670	22,390
1963-64	21,000	22,260	23,360	24,750
1961-62	23,000	23,300	24,070	26,250
1959-60	22,500	23,560	25,420	26,500
1957-58	22,500	24,960	25,480	27,910
1955-56	24,320	25,820	25,500	27,000
1953-54	22,590	26,010	27,810	28,130
1951-52	23,750	26,770	27,990	29,460
1949-50	24,500	27,950	28,740	29,550
1944-48	25,850	28,150	29,250	32,560
1939-43	26,420	28,900	28,930	29,480
1934-38	26,140	29,200	28,960	32,450
1929-33	*	27,080	28,220	*
1928 and before	*	25,500	*	*

*Fewer than 20 cases

SOURCE: American Society of Civil Engineers, ASCE Salary Survey 1975.

TABLE 92

MEDIAN ENTRANCE AND MAXIMUM SALARIES FOR ALL GRADES* OF CIVIL ENGINEERS BY CLASS OF EMPLOYMENT AND GEOGRAPHICAL REGION, 1975.

CLASS OF EMPLOYMENT	GEOGRAPHICAL REGION					
	New England	Middle Atlantic	Middle West	South	West	Far West
CONSULTANTS						
Entrance	$16,000	$16,800	$16,000	$16,000	$15,250	$18,000
Maximum	20,000	21,000	20,000	20,000	18,850	22,400
CONTRACTORS						
Entrance	18,500	16,650	18,000	19,501	19,001	18,000
Maximum	23,000	22,900	24,900	22,400	25,000	24,600
STATE DEPARTMENTS and AGENCIES (TRANSPORTATION, HIGHWAY, PUBLIC WORKS)						
Entrance	15,285	18,168	17,316	14,456	15,864	17,340
Maximum	20,573	24,685	22,000	20,088	22,368	23,664
MUNICIPALITIES, COUNTIES, and REGIONAL AUTHORITIES						
Entrance	16,000	17,945	17,130	14,844	14,904	17,888
Maximum	20,777	23,815	21,827	19,981	18,720	21,924
RAILROADS, UTILITIES & INDUSTRIES						
Entrance	-	19,100	17,940	18,650	18,360	17,700
Maximum	45,000	28,000	24,522	27,300	26,600	23,695
EDUCATION (9 - 10 Months)						
Entrance	15,300	19,000	16,180	16,000	19,500	17,800
Maximum	20,000	23,000	20,000	19,000	22,800	22,000
EDUCATION (11 - 12 Months)						
Entrance	15,000	20,000	21,900	19,125	21,022	17,400
Maximum	19,363	27,700	26,000	27,300	24,100	20,167
TOTALS						
Entrance	16,000	17,275	16,822	16,000	16,200	18,000
Maximum	20,000	22,201	21,300	20,000	20,300	22,692

* ASCE Grade Classification Series comprises eight professional grades, which are based grade for grade on the requirements for the U.S. Civil Service Commission professional grade series, identified as GS-5 to 7 (Grades 1 and 2), GS- 9, 11, 12, 13, 14, 15, and 16 respectively.

SOURCE:. American Society of Civil Engineers, ASCE Salary Survey 1975.

TABLE 93

ANNUAL SALARIES OF CIVIL ENGINEERS BY EQUIVALENT ASCE GRADE LEVEL, 1973 AND 1975

G.S. GRADE	ASCE GRADE	1973 SALARY	1975 SALARY	PERCENT CHANGE
5	I/II	$ 8,055	$11,607	44.1
7		9,969	12,518	25.6
9	III	12,167	13,482	10.8
11	IV	14,671	16,255	10.8
12	V	17,497	19,386	10.8
13	VI	20,677	22,906	10.8
14	VII	24,247	26,861	10.8
15	VIII	28,263	31,309	10.8
16	IX	32,806	36,338	10.8
17	IX	37,976*	42,066*	10.8
18	IX	43,926*	48,654*	10.8

* The rate of basic pay for employees at these rates was limited by Section 5308 of Title 5 of the United States Code to the rate for level V of the Executive Schedule (as of the effective date of this schedule: $37,800). It has been raised to $47,500 as of Feb. 20, 1977.

TABLE 94

AVERAGE TOTAL COMPENSATION OF CIVIL ENGINEERS INCLUDING FRINGE BENEFITS BY ASCE GRADES, EQUIVALENT FEDERAL GRADES AND CLASS OF EMPLOYMENT, 1975

CLASS OF EMPLOYMENT	ASCE GRADES AND EQUIVALENT FEDERAL GS GRADES							
	GS-5 - GS-7 I/II	GS-9 III	GS-11 IV	GS-12 V	GS-13 VI	GS-14 VII	GS-15 VIII	GS-16 IX
CONSULTANTS	$13,457	$16,074	$18,400	$21,377	$24,901	$28,731	$33,298	$40,477
CONTRACTORS	13,982	16,297	20,443	24,092	27,568	33,349	39,317	44,665
STATE DEPARTMENTS & AGENCIES (TRANSPORTATION, HIGHWAY, PUBLIC WORKS, ETC.	14,601	19,002	20,423	24,037	26,303	27,461	31,542	35,822
MUNICIPALITIES, COUNTIES & REGIONAL AUTHORITIES	16,709	18,211	20,484	22,380	25,426	27,267	32,351	39,122
RAILROADS, UTILITIES & INDUSTRIES	17,620	19,107	22,103	24,401	28,697	32,834	38,123	46,202
EDUCATION (11-12 Months)	13,145	17,026	19,550	22,764	26,303	32,367	32,665	65,000
EDUCATION (9-10 Months)	8,020	12,410	16,241	18,468	22,782	26,300	30,166	35,900

SOURCE: American Society of Civil Engineers, ASCE Salary Survey 1975

TABLE 95

AVERAGE OF MEDIAN ENTRANCE RATES FOR ALL GRADES OF CIVIL ENGINEERS BY CLASS OF EMPLOYMENT, 1973 AND 1975

CLASS OF EMPLOYMENT	Average of Median Entrance Rates-All Grades			
	1975	1973	Percent Change 1973-75	Maximum Rates 1975
Consulting Firms	$18,884	$16,067	+17.5%	$24,025
Construction Firms	20,450	17,183	+19.0%	27,125
State Departments and Agencies (Transportation, Highway, Public Works, etc.)	17,674	15,375	+15.0%	23,522
Municipalities, Counties, and Regional Authorities	19,202	15,295	+25.5%	23,385
Railroads, Utilities, and Industry	21,236	17,344	+22.4%	28,925

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, Part I: Manufacturing Engineers, 1976.

TABLE 96

NUMBER AND TOTAL ANNUAL INCOME OF MANUFACTURING ENGINEERS BY TYPE OF EMPLOYER, 1976

TYPE OF EMPLOYER	Total Employees	Median Income	Mean Income
Chemical, Rubber & Plastics Products	46	$18,601	$20,558
Primary Metal Industries	50	18,398	20,753
Fabricated Metal Products	247	16,900	17,452
Machinery (Except Electrical)	181	16,800	18,404
Electrical and Electronic Equipment	243	18,750	18,989
Transportation Equipment	348	20,000	20,338
Instruments & Related Products	55	17,000	17,160
Other Manufacturing Industries	192	17,078	19,126
Other Non-Manufacturing Industries		19,600	20,671

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, Part I: Manufacturing Engineers, 1976.

TABLE 97

NUMBER AND TOTAL ANNUAL INCOME OF MANUFACTURING ENGINEERS BY EDUCATION LEVEL, 1976

EDUCATION LEVEL	Total Employees	Median Income	Mean Income
Ph.D.	11	$22,500	$22,614
Master's	115	20,892	22,757
B.S. in Engineering	376	19,561	20,612
Other BA/BS Degree	146	16,801	17,637
Engineering Technician Degree	269	17,729	18,015
Some College	329	17,192	18,267
No College	186	17,500	17,980

TABLE 98

NUMBER AND TOTAL ANNUAL INCOME OF MANUFACTURING ENGINEERS BY YEARS OF EXPERIENCE, 1976

YEARS OF EXPERIENCE	Total Employees	Median Income	Mean Income
Under 5 Years	176	$14,150	$14,863
5-9 Years	196	16,964	17,300
10-14 Years	223	17,200	17,993
15-19 Years	221	18,500	19,167
20-24 Years	241	19,801	21,228
25-29 Years	189	20,500	22,137
30 Years and Over	180	19,750	20,667

TABLE 99

NUMBER AND TOTAL ANNUAL INCOME OF MANUFACTURING ENGINEERS BY GEOGRAPHIC AREA, 1976

GEOGRAPHIC AREA	Total Employees	Median Income	Mean Income
New England States	121	$17,500	$18,127
New York and New Jersey	113	19,694	19,943
Pennsylvania	125	17,850	18,690
Southeastern States	124	17,000	18,842
Ohio	115	18,000	18,986
Michigan	165	20,000	20,092
Indiana	70	17,260	18,223
Illinois/Wisconsin	209	17,000	18,207
Southwestern States	66	18,640	21,923
California	144	19,130	19,690
Great Plains & Western States	189	17,600	19,030

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, Part 1: Manufacturing Engineers, 1976.

TABLE 100

NUMBER AND TOTAL ANNUAL COMPENSATION OF MANUFACTURING ENGINEERS BY TYPE OF JOB FUNCTION, 1976

JOB FUNCTION	Total Employees	Median Income	Mean Income
Cost Estimating	40	$18,443	$18,721
Industrial Engineering	105	17,265	17,687
Manufacturing Engineering	380	18,032	18,788
Manufacturing Planning	72	18,809	22,312
Mechanical Engineering	49	18,000	18,053
Methods & Systems Engineering	61	16,484	17,755
Process Engineering	70	19,000	19,666
Production Engineering	40	19,550	19,403
Quality Assurance Engineering	58	17,900	17,981
Tool Engineering	171	17,100	18,149
Other Manufacturing Engineering	63	18,000	17,779
Equipment Design Engineering	36	18,425	18,534
Product Design Engineering	72	18,750	19,079
Research & Development Engineering	55	21,230	21,965
Other R & D Product Design Functions	25	17,988	19,623
Technical Sales Engineering	75	20,001	24,971
All Other Engineering Functions	60	15,650	17,324

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, June 1977.

TABLE 101

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY DEGREE LEVEL, 1977

DEGREE LEVEL	Total Employees	Median Income	Mean Income
Ph.D.	357	$27,000	$29,165
MA/ME/MS	1,146	23,501	26,267
MBA	775	24,200	27,022
Bachelor's (Engineering)	2,360	21,000	23,194
Bachelor's (non-Engineering)	855	21,400	23,011
Less Than Bachelor's Degree	825	19,180	20,820

TABLE 102

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY YEARS OF EXPERIENCE, 1977

YEARS OF EXPERIENCE	Total Employees	Median Income	Mean Income
Under 2 Years	204	$14,401	$15,778
2-4 Years	946	16,277	17,111
5-9 Years	1,401	19,769	20,583
10-14 Years	1,166	23,040	24,082
15-19 Years	910	25,446	27,884
20-24 Years	786	26,061	29,331
25-29 Years	650	27,115	30,400
30 Years and Over	305	28,001	31,624

TABLE 103

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY GEOGRAPHIC AREA, 1977

GEOGRAPHIC AREA	Total Employees	Median Income	Mean Income
Northeastern States	1,452	$22,500	$25,423
Southern States	1,391	21,600	23,146
Midwestern States	1,456	21,800	24,191
Southwestern States	439	21,960	24,168
Plains States	413	20,715	22,228
Mountain States	176	22,350	24,441
Pacific States	643	23,580	25,790
Canada	398	21,001	22,776

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, June 1977.

TABLE 104

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY TYPE OF EMPLOYER, 1977

TYPE OF EMPLOYER	Total Employees	Median Income	Mean Income
Food and Kindred Products	246	$22,904	$24,931
Textile Mill Products	94	19,238	20,699
Apparel and Other Textile Products	116	20,251	24,659
Furniture & Wood Products	43	17,400	21,835
Paper and Allied Products	160	21,500	23,690
Printing and Publishing	88	21,497	23,236
Chemical and Allied Products	378	22,605	24,838
Rubber and Misc. Plastics Products	176	20,000	22,310
Stone, Clay and Glass Products	141	21,000	22,938
Primary Metal Industries	348	22,501	24,423
Fabricated Metal Products	806	19,671	22,023
Machinery (Except Electrical)	211	21,300	24,453
Electrical and Electronic Equipment	789	21,500	23,144
Transportation Equipment	304	21,391	23,141
Instruments & Related Products	71	19,001	22,190
Banks and Finance Organizations	84	19,851	25,016
Colleges and Universities	365	25,000	26,973
Communications Organizations	308	27,800	32,317
Consulting Organizations	308	27,800	32,317
Governmental Organizations	543	24,000	24,547
Hospitals and Health Organizations	231	20,500	21,806
Insurance Companies	45	17,150	18,689
Merchandising (Wholesale and Retail)	97	24,000	25,510
Public Utilities	104	22,813	23,106
Transportation and Warehousing	127	24,000	25,290

SALARIES OF ENGINEERING TECHNICIANS AND TECHNOLOGISTS

From 1975 to 1977, median annual salaries of engineering technicians increased 13.5% for new graduates, 15.0% for those out of school five years, 15.1% for those out of school 9-11 years, and 12.5% for those graduating 21-23 years ago, according to studies by the *Engineering Manpower Commission of Engineers Joint Council*. Table 105 shows number, median and mean annual salaries for engineering technicians in 1977 by years since graduation, while Chart 9 presents the picture in graphic form.

In 1975, the salaries of engineering technicians increased about 5.2% from 1973 for those just out of school and 8.9% for those with 35 or more years since graduation. Graduate technicians start out at substantially higher salaries than non-graduates, but the advantage is reduced and ultimately slightly reversed with increasing experience. The median annual salary for graduate technicians in 1975 started at $9,200 for those with less than a year of experience, increased steadily to $13,000 twelve 12 years after graduation, then rose gradually to a maximum of $13,700.

The 1975 survey results are based on returns from 630 different establishments, employing 71,537 technicians. Tables 106 and 108 present median salaries of engineering technicians by type of employment and selected years since graduation.

Engineering technicians working in the western states have higher median salaries during the first 20 years of their careers. However, after 20 years of working, those engineering technicians in the north central area have higher median annual salaries (Table 107).

The small group of bachelor of technology graduates (about 2,400 in the 1975 survey) report median starting salaries of $10,400 in 1975, 13% higher than the median for two-year graduates and 35% more than for non-graduates. Median salaries of bachelor of technology recipients by type of employment and selected years since graduation in 1975 are presented in Table 109.

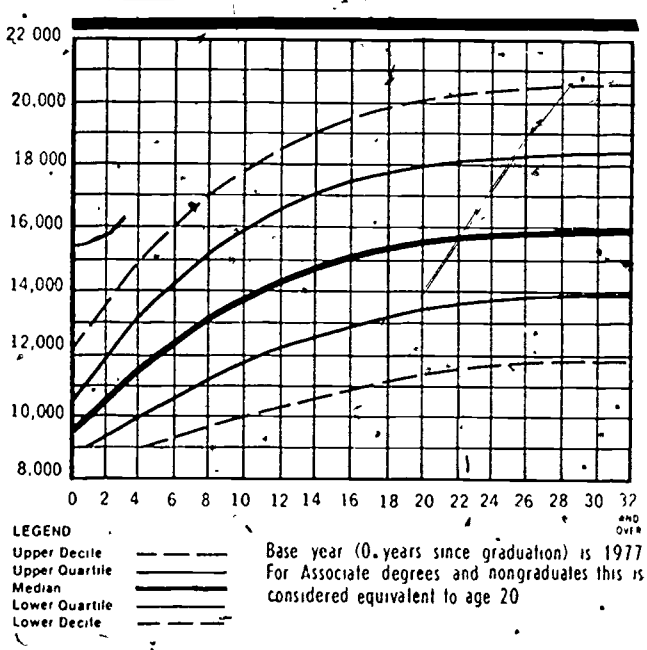
SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1977.

TABLE 105

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING TECHNICIANS BY YEARS SINCE GRADUATION, 1977

YEARS SINCE GRADUATION	NUMBER OF TECHNICIANS	SALARY	
		MEDIAN	MEAN
0	613	$9,650	$10,150
1	1,326	10,100	10,550
2	1,690	10,550	10,950
3	2,065	11,000	11,350
4	2,273	11,450	11,750
5	2,270	11,850	12,150
6	2,040	12,300	12,500
7	2,205	12,650	12,900
8	2,496	13,050	13,200
9-11	7,324	13,700	13,850
12-14	6,235	14,500	14,650
15-17	5,426	15,100	15,250
18-20	5,011	15,500	15,650
21-23	4,399	15,750	15,900
24-26	3,602	15,900	16,050
27-29	3,520	15,950	16,100
30-34	4,860	15,950	16,100
35+	6,179	15,950	16,100

CHART 9 - ANNUAL SALARY OF ALL ENGINEERING TECHNICIANS BY EQUIVALENT YEARS SINCE GRADUATION FROM TECHNICAL INSTITUTE, 1977*



SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1975

TABLE 106

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1975

TYPE OF INDUSTRY	YEARS SINCE GRADUATION - BASE YEAR 1975								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Mechanical Products	(103) $9,500	(148) $10,900	(169) $11,550	(444) $12,350	(378) $13,600	(391) $13,800	(343) $13,900	(300) $13,950	(568) $13,750
Aerospace	(8) 8,800	(26) 10,200	(42) 10,850	(133) 11,700	(120) 12,950	(121) 13,250	(152) 13,400	(111) 13,300	(163) 12,700
Machinery	(41) 9,950	(55) 11,800	(63) 12,700	(151) 14,050	(141) 16,400	(137) 17,250	(110) 17,950	(90) 18,750	(158) 19,150
Metal Products	(60) 9,150	(81) 10,500	(83) 11,150	(225) 12,000	(143) 13,150	(164) 13,450	(127) 13,600	(136) 13,600	(274) 13,300
Fabricated Metal Products	(43) 8,950	(64) 10,450	(76) 11,150	(187) 12,050	(121) 13,300	(136) 13,600	(108) 13,750	(110) 13,700	(238) 13,400
Metals, Basic & Mining	(17) 10,400	(17) 10,950	(7) 11,200	(38) 11,600	(22) 12,300	(28) 12,600	(19) 12,850	(26) 13,150	(36) 13,000
Electrical & Electronic Products	(355) 9,900	(717) 11,150	(879) 11,700	(2,127) 12,400	(1,515) 13,350	(1,347) 13,550	(1,262) 13,650	(1,053) 13,550	(1,199) 13,100
Electrical Equipment	(273) 11,150	(704) 12,050	(804) 12,500	(2,163) 13,150	(1,759) 14,150	(1,645) 14,450	(1,462) 14,600	(1,166) 14,450	(1,031) 12,750
Electronic Equipment	(163) 9,250	(244) 10,850	(285) 11,550	(527) 12,400	(319) 13,600	(234) 13,950	(241) 14,150	(229) 14,400	(322) 14,500
All Consumer Products	(47) 9,700	(93) 11,050	(93) 11,650	(177) 12,450	(152) 13,650	(166) 14,050	(157) 14,350	(177) 14,700	(222) 14,900
Chemicals	(21) 9,400	(19) 11,000	(22) 11,800	(40) 12,800	(27) 14,200	(35) 14,550	(42) 14,700	(43) 14,600	(39) 14,150
Petroleum	(20) 10,000	(49) 10,950	(65) 11,450	(117) 12,100	(90) 13,350	(111) 13,850	(126) 14,300	(129) 15,000	(168) 15,600
Paper	- -	(16) 11,300	(10) 11,850	(30) 12,500	(39) 13,250	(29) 13,400	(21) 13,450	(30) 13,400	(26) 13,350
Construction	(47) 9,300	(34) 11,150	(38) 12,050	(101) 13,300	(86) 15,100	(88) 15,700	(54) 16,100	(38) 16,450	(77) 16,550
Engineering & Architectural Consulting	(144) 8,300	(161) 10,450	(172) 11,350	(321) 12,450	(212) 13,800	(200) 14,200	(148) 14,400	(115) 14,600	(201) 14,650
Technical Services, Other	(10) 7,800	(24) 9,750	(24) 10,750	(55) 12,200	(38) 14,500	(34) 15,150	(21) 15,400	(20) 15,250	(29) 14,300
Research & Development	(124) 9,250	(245) 11,900	(321) 12,750	(575) 13,550	(567) 14,250	(477) 14,350	(409) 14,400	(381) 14,450	(662) 14,450
Industrial R & D	(38) 10,000	(150) 12,400	(189) 13,200	(294) 13,850	(275) 14,650	(245) 14,750	(229) 14,800	(231) 14,850	(352) 14,850
R & D Laboratories	(30) 7,850	(32) 9,100	(51) 9,750	(89) 10,700	(122) 12,500	(67) 13,200	(70) 13,750	(63) 14,200	(133) 13,350
Electric Utilities	(90) 9,350	(158) 11,250	(182) 12,100	(471) 13,150	(272) 14,700	(215) 15,150	(183) 15,500	(200) 15,850	(214) 16,000
Gas Utilities & Pipelines	-	(9) 11,600	(13) 11,750	(41) 12,000	(44) 12,450	(52) 12,700	(75) 12,900	(52) 13,350	(57) 14,050
Communications	-	(9) 11,950	(12) 13,050	(39) 14,450	(38) 16,150	(32) 16,600	(21) 16,900	(12) 17,150	(21) 17,200

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1975.

TABLE 107

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS IN INDUSTRY BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE GRADUATION, 1975

GEOGRAPHIC AREA	YEARS SINCE GRADUATION - BASE YEAR 1975								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Northeast	(322) $9,150	(581) $10,700	(779) $11,250	(1,801) $11,900	(1,177) $12,650	(1,101) $12,800	(1,024) $12,900	(907) $13,000	(1,467) $13,050
North Central	(189) 9,000	(277) 10,950	(304) 11,850	(745) 13,000	(517) 14,550	(461) 15,050	(404) 15,350	(380) 15,700	(601) 15,800
South	(187) 8,950	(257) 10,250	(314) 10,850	(716) 11,650	(516) 12,850	(428) 13,200	(459) 13,450	(407) 13,650	(463) 13,600
West	(107) 9,600	(91) 11,750	(114) 12,700	(297) 13,800	(256) 14,950	(237) 15,100	(163) 15,000	(159) 14,900	(287) 14,650

TABLE 108

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1975

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1975								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Industry	(895) $9,300	(1,457) $11,100	(1,743) $11,800	(4,140) $12,600	(3,070) $13,600	(2,796) $13,850	(2,490) $14,000	(2,213) $14,150	(2,968) $14,200
All Manufacturing Industry	(505) 9,700	(958) 11,050	(1,141) 11,650	(2,748) 12,400	(2,045) 13,400	(1,904) 13,600	(1,762) 13,750	(1,530) 13,750	(1,989) 13,550
All Non-Mfg. Industry	(390) 8,850	(499) 11,050	(602) 11,950	(1,392) 13,050	(1,025) 14,400	(892) 14,750	(728) 14,950	(683) 15,150	(979) 15,200
Federal Government	(121) 7,950	(171) 9,500	(198) 10,250	(537) 11,300	(517) 13,100	(450) 13,750	(350) 14,250	(288) 14,850	(808) 15,200
State Government	(243) 7,300	(359) 8,800	(504) 9,500	(1,231) 10,500	(1,178) 11,900	(1,171) 12,250	(846) 12,400	(505) 12,200	(1,028) 11,500
Local Government	(19) 8,850	(74) 10,600	(46) 11,400	(154) 12,500	(123) 14,100	(116) 14,600	(102) 15,000	(111) 15,450	(143) 15,650
Education	(11) 8,400	(37) 9,900	(30) 10,550	(79) 11,350	(98) 12,350	(85) 12,600	(106) 12,700	(93) 12,650	(274) 12,550
Engineering Schools	(6) 8,750	(25) 10,050	(24) 10,600	(63) 11,400	(85) 12,350	(77) 12,600	(98) 12,750	(87) 12,700	(249) 12,500
Technician Schools	(5) 7,900	(12) 9,700	(6) 10,500	(16) 11,450	(13) 12,550	(8) 12,750	(8) 12,850	(6) 12,850	(25) 12,800

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1975.

TABLE 109

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNOLOGISTS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1975

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1975								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Employment Sectors	(193) $11,200	(161) $12,600	(101) $13,150	(224) $14,350	(108) $16,100	(92) $17,000	(124) $17,000	(64) $16,000	(83) $13,450
All Industry	(165) 11,500	(122) 13,050	(83) 13,750	(184) 14,600	(75) 15,500	(63) 15,550	(77) 15,400	(42) 14,750	(55) 13,450
All Manufacturing Industry	(81) 11,200	(52) 11,000	(49) 12,200	(121) 13,450	(50) 16,200	(44) 14,000	(48) 12,900	(32) 12,850	(40) 13,050
All Non-Mfg. Industry	(84) 11,650	(70) 13,900	(34) 14,800	(63) 15,950	(25) 16,150	(19) 18,500	(29) 19,150	(10) 18,000	(15) -
All Mechanical Products	(22) 12,000	(9) 11,750	(17) 16,250	(50) 18,550	(20) -	(20) 20,000	(11) -	(7) -	(6) 15,550
Electrical & Electronic Products	(72) 10,650	(51) 11,150	(26) 11,000	(79) 11,900	(37) 15,150	(27) 12,250	(37) 12,700	(29) 12,600	(28) 11,850
Construction & Consulting	(47) 11,400	(34) 13,000	(12) 14,000	(27) 17,150	(19) 15,900	(9) 18,500	(20) 18,000	(6) 20,000	(13) -
All Research & Development	(19) 10,550	(11) 13,400	(6) 12,500	(9) 12,750	(5) 13,750	(2) -	(3) -	(1) -	(1) -
Utilities	(31) 11,750	(32) 14,850	(17) 15,100	(25) 15,650	(4) -	(5) 17,250	(6) 20,000	(4) -	- -
All Government	(19) 10,750	(23) 12,250	(6) 12,500	(29) 11,650	(22) 16,000	(24) -	(39) -	(20) -	(16) 17,000
Education	(9) 10,250	(16) 12,500	(12) 15,000	(11) 13,250	(11) 12,950	(5) 16,500	(8) 11,750	(2) -	(12) 12,250

FEDERAL SALARIES

On October 1, 1977, 1.4 million federal white-collar workers and 2 million military personnel around the world received a 7.05% pay increase. The annual federal pay raise is designed to keep federal employees' pay on a par with their counterparts in private industry. With the pay increase, the average salary of the white-collar worker in the Washington, D. C. area will go from $19,430 to $20,800, according to the U.S. Civil Service Commission, while the national average rises to $17,674 from $16,510.

At the top levels of the General Salary Schedule for federal workers, the raises will be smaller and in some cases nonexistent, since federal career salaries are presently limited by law to $47,500 (Table 110). Table 111 presents the white-collar salary schedule in effect from October 1, 1976 to October 1, 1977.

Table 112 presents the median grade and average salary of federal white-collar workers by sex in all areas as of October 1976. Women continue to be paid less than men in almost all the occupational series listed. Even in the "secretary" category (where the bulk of female employees working for the federal government are concentrated), men earn slightly more than women - $11,940 to $11,937 respectively.

Among the engineering specialties, general engineers had the highest average salary - $28,935, followed by aerospace engineers at $28,662 and materials engineers at $27,946. In the sciences, those persons in the "general fish and wildlife" category earned the highest salaries, $31,951, followed by astronomers and space scientists at $30,234. Salaries in the health and medical areas show wide variation between medical officers at the top and dental assistants at the bottom (Table 112).

Tables 113 and 114 present a comparison of salaries of federal workers with those of workers in private industry in 1975 and 1976. Salaries paid personnel in private industry are generally higher than those paid by the federal government in the higher paying jobs. For example, a chief chemist in private industry earned $40,723 in private industry, but only $38,077 in the federal government (Table 113). In lower level jobs, however, the federal salaries are sometimes higher such as for a secretary with medium experience.

SOURCE: U.S. Civil Service Commission

TABLE 110

ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS, OCTOBER 1, 1977

	1	2	3	4	5	6	7	8	9	10
GS- 1	$ 6,219	$ 6,426	$ 6,633	$ 6,840	$ 7,047	$ 7,254	$ 7,461	$ 7,668	$ 7,875	$ 8,082
2	7,035	7,270	7,505	7,740	7,975	8,210	8,445	8,680	8,915	9,150
3	7,930	8,194	8,458	8,722	8,986	9,250	9,514	9,778	10,042	10,306
4	8,920	9,199	9,496	9,793	10,090	10,387	10,684	10,981	11,278	11,575
5	9,959	10,291	10,623	10,955	11,287	11,619	11,951	12,283	12,615	12,947
6	11,101	11,471	11,841	12,211	12,581	12,951	13,321	13,691	14,061	14,431
7	12,336	12,747	13,158	13,569	13,980	14,391	14,802	15,213	15,624	16,035
8	13,662	14,117	14,572	15,027	15,482	15,937	16,392	16,847	17,302	17,757
9	15,090	15,593	16,096	16,599	17,102	17,605	18,108	18,611	19,114	19,617
10	16,618	17,172	17,726	18,280	18,834	19,388	19,942	20,496	21,050	21,604
11	18,258	18,867	19,476	20,085	20,694	21,303	21,912	22,521	23,130	23,739
12	21,883	22,612	23,341	24,070	24,799	25,528	26,257	26,986	27,715	28,444
13	26,022	26,889	27,756	28,623	29,490	30,357	31,224	32,091	32,958	33,825
14	30,750	31,775	32,800	33,825	34,850	35,875	36,900	37,925	38,950	39,975
15	36,171	37,377	38,583	39,789	40,995	42,201	43,407	44,613	45,891	47,025
16	42,423	43,837	45,251	46,665	48,079*	49,493*	50,907*	52,321*	53,735*	
17	49,696*	51,353*	53,010*	54,667*	56,324*					
18	58,245*									

* The rate of basic pay for employees at these rates is limited by section 5308 of title 5 of the United States Code to the rate for level V of the Executive Schedule which, pursuant to Public Law 95-66, would remain $47,500.

SOURCE: U.S. Civil Service Commission

TABLE 111

ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS, OCTOBER 1976

	1	2	3	4	5	6	7	8	9	10
GS- 1	$ 5,810	$ 6,004	$ 6,198	$ 6,392	$ 6,586	$ 6,780	$ 6,974	$ 7,168	$ 7,362	$ 7,556
2	6,572	6,791	7,010	7,229	7,448	7,667	7,886	8,105	8,324	8,543
3	7,408	7,655	7,902	8,149	8,396	8,643	8,890	9,137	9,384	9,631
4	8,316	8,593	8,870	9,147	9,424	9,701	9,978	10,255	10,532	10,809
5	9,303	9,613	9,923	10,233	10,543	10,853	11,163	11,473	11,783	12,093
6	10,370	10,716	11,062	11,408	11,754	12,100	12,446	12,792	13,138	13,484
7	11,523	11,907	12,291	12,675	13,059	13,443	13,827	14,211	14,595	14,979
8	12,763	13,188	13,613	14,038	14,463	14,888	15,313	15,738	16,163	16,588
9	14,097	14,567	15,037	15,507	15,977	16,447	16,917	17,387	17,857	18,327
10	15,524	16,041	16,558	17,075	17,592	18,109	18,626	19,143	19,660	20,177
11	17,056	17,625	18,194	18,763	19,332	19,901	20,470	21,039	21,608	22,177
12	20,442	21,123	21,804	22,485	23,166	23,847	24,528	25,209	25,890	26,571
13	24,308	25,118	25,928	26,738	27,548	28,358	29,168	29,978	30,788	31,598
14	28,725	29,683	30,641	31,599	32,557	33,515	34,473	35,431	36,389	37,347
15	33,789	34,915	36,041	37,167	38,293	39,419	40,545	41,671	42,797	43,923
16	39,629	40,950	42,271	43,592	44,913	46,234	47,555	48,876	50,197	
17	46,423	47,970*	49,517*	51,064*	52,611*					
18	54,410*									

* The rate of basic pay for employees at these rates is limited by section 5308 of title 5 of the United States Code to the rate for level V of the Executive Schedule (as of the effective date of this schedule, $47,500).

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1976.

TABLE 112

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1976

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE	
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary
General Engineering	16,250	13	$28,934	16,138	$28,987	112	$21,379
Engineering Technician	25,901	9	16,779	24,994	16,952	907	12,007
Safety Engineering	563	12	24,678	557	24,668	6	25,643
Fire Prevent Engineering	100	13	25,713	99	25,766	1	20,442
Materials Engineering	869	13	27,946	857	28,022	12	22,464
Landscape Architecture	569	12	22,497	547	22,621	22	19,420
Architecture	1,523	12	23,037	1,454	23,209	69	19,412
Construction Control	3,749	9	15,888	3,734	15,903	15	12,147
Civil Engineering	15,274	12	23,921	15,173	23,956	101	18,705
Surveying Technician	2,718	4	10,276	2,613	10,386	105	7,542
Engineering Drafting	2,422	5	11,342	2,064	11,441	358	10,773
Sanitary Engineering	1,214	12	22,158	1,200	22,225	14	16,432
Construction Analyst	1,050	11	20,903	1,032	20,980	18	16,509
Mechanical Engineering	10,085	12	23,871	10,044	23,888	41	19,649
Nuclear Engineering	2,152	13	27,263	2,141	27,296	12	21,466
Electrical Engineering	4,535	12	23,189	4,501	23,214	34	19,972
Electronics Engineering	19,611	12	25,532	19,481	25,565	130	20,518
Electronics Technician	24,320	11	19,688	24,163	19,733	157	12,666
Aerospace Engineering	8,451	13	28,662	8,359	28,731	92	22,339
Naval Architecture	1,023	12	25,892	1,015	25,915	8	22,975
Mining Engineering	508	13	25,778	507	25,801	1	14,097
Petroleum Engineering	351	13	24,985	349	25,053	2	13,251
Agricultural Engineering	443	11	23,094	443	23,094	0	-
Ceramic Engineering	54	13	26,958	52	27,330	2	17,284
Chemical Engineering	1,398	12	25,401	1,382	25,466	16	19,794
Welding Engineering	69	12	24,581	69	24,581	0	-
Industrial Engr. Tech.	2,477	9	17,508	2,378	17,635	99	14,456
Industrial Engineering	2,455	12	23,874	2,439	23,903	16	19,443
Trainee, Engr. & Architecture	1,036	4	8,361	907	8,443	129	7,782
Biomedical Engineering	83	11	19,462	81	19,453	2	19,797
Ship Surveying	52	12	21,996	52	21,996	-	-

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1976.

TABLE 112 (Continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1976

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE	
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary
General Physical Science	4,596	14	$29,754	4,420	$30,023	176	$23,015
Health Physics	519	13	24,521	504	24,672	15	19,456
Physics	5,312	13	27,320	5,169	27,456	143	22,404
Physical Science Tech.	3,931	7	13,588	3,186	14,093	745	11,428
Geophysics	404	12	25,346	397	25,425	7	20,856
Hydrology	1,687	12	24,360	1,659	24,487	28	16,803
Chemistry	8,080	12	23,727	6,852	24,430	1,228	19,804
Metallurgy	607	12	26,210	596	26,247	11	24,209
Astronomy and Space Sci.	572	13	30,234	551	30,426	21	25,194
Meteorology	2,145	12	25,254	2,101	25,425	44	17,085
Meteorological Technician	2,543	10	16,631	2,353	16,902	190	13,286
Geology	2,053	12	24,673	1,905	25,029	148	20,089
Oceanography	746	12	23,652	710	23,952	36	17,735
Cartography	2,611	11	20,959	2,388	21,227	223	18,090
Cartographic Technician	3,008	9	14,925	2,291	15,496	717	13,101
Geodesy	252	12	23,523	235	23,814	17	19,500
Food Technology	174	12	24,471	145	25,556	29	19,092
Forest Products Technology	124	13	26,190	121	26,403	3	17,603
General Fish & Wildlife	171	14	31,951	170	32,014	1	21,305
Gen. Biological Science	3,522	12	22,312	2,954	23,184	568	17,779
Microbiology	1,699	12	22,147	1,178	23,640	521	18,770
Biological Technician	5,750	6	11,779	4,036	12,066	1,714	11,104
Zoology	135	13	26,240	119	26,875	16	21,518
Entomology	754	12	24,702	729	24,948	25	17,532
Botany	130	12	22,865	97	24,211	33	18,907
Plant Pathology	306	13	27,241	297	27,461	9	19,976
Plant Physiology	238	13	25,874	227	26,229	11	18,558
Horticulture	92	12	22,360	83	23,458	9	12,237
Soil Conservation	4,431	11	19,443	4,403	19,487	28	12,440
Soil Science	1,766	11	20,108	1,744	20,211	22	11,927
Agronomy	323	12	24,241	322	24,271	1	14,567
Agricultural Management	3,017	11	18,568	2,988	18,622	29	12,994
Range Conservation	801	9	17,295	789	17,393	12	10,814
Forestry	5,206	11	21,503	5,190	21,526	16	13,987
Fishery Biology	1,065	11	21,102	1,018	21,412	47	14,391
Wildlife Biology	723	11	20,746	702	20,866	21	16,721

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1976.

TABLE 112 (Continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1976

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE	
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary
Economics	5,026	13	$25,185	4,370	$25,819	656	$20,962
Psychology	2,950	13	25,543	2,526	26,063	424	22,449
Social Science	2,284	12	24,162	1,569	25,214	715	21,852
Social Work	3,108	11	20,121	1,762	20,607	1,346	19,486
Sociology	87	13	24,266	55	26,217	32	20,912
Foreign Affairs	2,282	13	27,140	2,004	27,865	278	21,906
International Relations	83	14	29,274	64	31,923	19	20,350
Manpower Res. & Analysis	50	14	30,420	39	31,483	11	26,650
Geography	154	11	21,517	127	22,207	27	18,276
History	459	12	24,275	387	24,976	72	20,506
General Anthropology	62	13	28,512	51	29,565	11	23,630
Archeology	169	9	17,203	124	19,035	45	12,155
Secretary	64,036	6	11,940	453	12,252	63,583	11,937
Digital Computer Systems	1,623	13	28,037	1,454	28,836	169	21,163
Computer Operation	11,363	7	12,965	7,154	13,747	4,209	11,635
Computer Specialist	25,379	12	21,882	20,503	22,477	4,876	19,383
Computer Aid & Technician	6,449	5	11,707	2,339	12,418	4,110	11,303
Program Management	3,537	15	34,182	3,355	34,556	182	27,294
Management Analysis	10,485	12	21,757	8,004	22,807	2,481	18,369
Communications Management	2,095	11	21,347	1,970	21,637	125	16,791
Program Analysis	9,623	12	24,401	7,153	26,037	2,470	19,663
Communications Specialist	2,167	11	20,682	1,949	21,287	218	15,274
Operations Research	2,673	13	27,993	2,488	28,511	185	21,033
Mathematics	4,178	12	23,511	3,382	24,191	796	20,624
Mathematics Technicians	265	6	12,171	107	11,752	158	12,454
Mathematical Statisticians	982	12	23,861	807	24,690	175	20,040
Statistician	2,427	12	23,399	1,862	24,271	565	20,526
Statistical Assistant	3,803	5	11,954	681	11,958	3,122	11,954
Actuary	101	12	24,610	85	25,238	16	21,274
Accounting	21,807	12	22,179	19,794	22,594	2,013	18,098
General Attorney	14,312	13	27,698	12,650	28,122	1,662	24,466

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1976.

TABLE 112 (Continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1976

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE	
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary
Medical Officer	10,368	15	$32,325	9,261	$32,151	1,107	$33,792
Physicians Assistant	377	9	14,718	236	14,857	141	14,485
Nurse	31,850	9	15,446	1,746	14,692	30,104	15,490
General Health Science	980	14	26,773	696	28,191	284	23,298
Medical Technologist	3,631	7	13,860	1,160	14,123	2,471	13,736
Medical Technician	2,923	6	11,711	1,398	12,106	1,525	11,349
Medical Radiology Tech.	2,499	6	11,818	1,536	12,294	963	11,059
Dental Officer	1,407	14	27,101	1,396	27,111	11	25,815
Dental Assistant	2,447	4	9,729	175	9,967	2,272	9,710
Dental Hygiene	332	5	10,723	10	10,359	322	10,735
Dietitian	1,132	9	17,915	36	18,743	1,096	17,887
Occupational Therapist	626	9	15,825	74	16,340	552	15,755
Physical Therapist	774	9	15,782	354	16,493	420	15,183
Optometrist	55	11	18,890	55	18,890	0	-
Podiatrist	24	11	20,257	22	20,341	2	19,332
Pharmacist	2,008	11	18,308	1,760	18,518	248	16,817
Pharmacology	310	13	26,785	261	27,189	49	24,628
Physiology	377	13	25,374	322	26,116	55	21,034
Genetics	207	13	26,744	192	27,301	15	19,621
Veterinary Med. Science	2,299	12	24,905	2,245	24,981	54	21,765
Industrial Hygiene	383	12	19,782	349	20,107	34	16,499
Hospital Administration	566	14	28,586	509	29,608	57	19,460

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Federal Salaries, U.S. Civil Service Commission; Private Salaries, U.S. Department of Labor

TABLE 113

COMPARISON OF FEDERAL AND PRIVATE AVERAGE SALARIES IN SELECTED JOBS, 1975 AND 1976

OCCUPATION	Oct. 1, 1975 Federal Salaries	Oct. 1, 1976 Federal Salaries	Salaries for Comparable Job In Industry 1976
Top Career Official	$37,800	$39,600	
Engineer (near top)	35,636	38,077	$36,236
Lawyer (near top)	35,636	38,077	43,747
Chief Chemist	35,636	38,077	40,723
Chief Accountant	30,541	32,661	33,916
Personnel Director	26,009	27,601	26,845
Accountant (experienced)	21,848	23,039	23,402
Auditor (experienced)	18,288	19,190	19,952
Buyer	18,288	19,190	20,075
Engineering Technician (exp.)	15,037	15,721	16,086
Accountant (medium experience)	15,037	15,721	15,428
Job Analyst (medium experience)	12,429	12,967	13,559
Secretary (medium experience)	10,139	10,569	9,641
Engineer (beginning)	10,139	10,569	13,918
Senior Stenographer	8,881	9,258	9,445
Junior Draftman	8,881	9,258	9,763
General Stenographer	7,617	7,945	8,472
Typist (experienced)	7,617	7,945	7,975
Accounting Clerk (beginning)	7,617	7,945	7,636
Typist (beginning)	6,487	6,772	6,827
File Clerk (beginning	5,658	5,913	5,875

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1976

TABLE 114

COMPARISON OF AVERAGE ANNUAL SALARIES IN PRIVATE INDUSTRY WITH SALARY RATES FOR FEDERAL EMPLOYEES UNDER THE GENERAL SCHEDULE, MARCH 1976

OCCUPATION AND LEVEL	Average salaries in private industry	Grade	SALARY RATES UNDER THE GENERAL SCHEDULE										
			1	2	3	4	5	6	7	8	9	10	Average salary[1]
Accountants I Chemists I Engineers I Eng. technicians III Drafters II	$11,453 12,473 13,918 12,258 12,029	GS-5	$ 8,925	$ 9,223	$ 9,521	$ 9,819	$10,117	$10 415	$10,713	$11,011	$11,309	$11,607	$10,139
Accountants II Chemists II Engineers II Eng. technicians IV Drafters III	13,394 14,077 15,184 14,178 15,288	GS-7	11,046	11,414	11,782	12,150	12,518	12,886	13,254	13,622	13,990	14,358	12,429
Accountants III Attorneys I Chemists III Engineers III Eng. technicians V	15,248 15,413 16,589 17,482 16,086	GS-9	13,482	13,931	14,380	14,829	15,278	15,727	16,176	16,625	17,074	17,523	15,037
Accountants IV Attorneys II Chemists IV Chief accountants I Engineers IV	18,738 18,667 20,429 20,460 20,749	GS-11	16,255	16,797	17,339	17,881	18,423	18,965	19,507	20,049	20,591	21,133	18,288
Accountants V Attorneys III Chemists V Chief accountants Engineers V	23,402 24,205 24,099 22,753 24,082	GS-12	19,386	20,032	20,678	21,324	21,970	22,616	23,262	23,908	24,544	25,200	21,848
Attorneys IV Chemists VI Chief accountants III Engineers VI	29,828 28,868 28,136 27,737	GS-13	22,906	23,670	24,434	25,198	25,962	26,726	27,490	28,524	29,018	29,782	26,009
Attorneys V Chemists VII Chief accountants IV Engineers VII	36,308 33,559 33,916 36,850	GS-14	26,861	27,756	28,651	29,546	30,441	31,336	32,231	33,126	34,021	34,916	30,541
Attorneys VI Chemists III Engineers VIII	43,747 40,723 36,236	GS-15	31,309	32,353	33,397	34,441	35,485	36,529	37,573	38,617	39,661	40,705	35,636

[1] Mean salary of all general schedule employees in each grade as of March 31, 1976.

ACADEMIC SALARIES

• The annual salary survey by the *American Association of University Professors* shows that salaries for continuing faculty members - those employed in two consecutive years - increased by 6.7% in 1976-77 while overall faculty salaries rose 4.7%. However, after correcting for the 5.8% rate of inflation for the same time period, the real increase in purchasing power for continuing faculty members was slightly under one percent, and there was a drop of 1% in terms of constant dollars for all faculty members combined.

Average compensation, which includes salary and fringe benefits, increased by 5.5%, suggesting a slight decrease in the real purchasing power of the average faculty member's remuneration.

The 1976-77 report is based on returns from 2,600 colleges and universities and covers the compensation and tenure status of about 360,000 full-time faculty members.

On the average, women's salaries were 5.1% lower than those of men of the same rank - the same differential as last year. However, in 1975-76, a third of women faculty members were reported to be in the upper two ranks; this year only 28% are reported in these two ranks.

Whatever their rank, and whatever type of institution employs them, women receive lower salaries and compensation on the average than men in the same rank and same type of institution (Tables 115 and 116).

Geographic location affects salary levels. The middle Atlantic states, followed closely by the Pacific states paid the highest salaries in every category of institution and every rank (Table 117).

The average salary of all faculty members of all ranks in all kinds of colleges and universities is $17,930. Fringe benefits of $2,740 bring the average compensation to $20,670, with fringe benefits averaging 15.3% of average compensation (Table 118).

The average salary for faculty members in preclinical departments of medical schools for all ranks is $26,230. Adding 12.9% for average fringe benefits, total compensation for these faculty members in 1976-77 was $30,130 (Table 120). Table 119 presents average faculty salaries and compensation in preclinical departments of medical schools by type of affiliation and academic rank for 1976-77.

• Preliminary data released by the *National Center for Education Statistics* on mean faculty salaries for 1976-77 shows an overall increase of 4.9% in salary from 1975-76. Women experienced a slightly higher increase than men - 5.2% and 5.1% respectively. However, women in every rank continue to receive lower salaries at every type of institution. For example, male professors had a mean faculty salary for 1976-77 of $23,828 compared to only $21,512 for women (Table 121).

Mean faculty salaries by academic rank, length of contract and sex for 1974-75 and 1975-76 are shown in Table 122. Women received slightly higher increases in salary from 1974-75 to 1975-76 at the professor and lecturer rank, but overall men had a higher percentage increase than women - 6.7% to 6.1% respectively, thus increasing the salary gap between men and women (Table 122). Faculty compensation by type of institution, length of contract and academic rank for 1975-76 is shown in Table 123.

By state or U.S. territory, Alaska paid the highest mean salaries to faculty members in institutions of higher education - $25,044 for men and $23,876 for women.

In the continential U.S., South Carolina paid the lowest salary to women faculty members, $11,640, while South Dakota paid the lowest to men, $14,006 (Table 124).

- The 1975-76 survey of faculty salaries by the *National Center for Education Statistics*, on which the above noted tables are based, covered 269,442 faculty members. The percent of the faculty who are women increased slightly from 1974-75 to 1975-76 to 24:3%. The largest increases in the percentages of women were at the ranks of professor and lecturer.

- The *National Science Foundation* reports that the median annual salary of doctoral scientists and engineers who are at four year colleges and universities was $17,200 on an academic year basis in 1975. Engineering doctorate faculty had the highest median salaries, $18,900 followed by medical scientists, $18,700 (Table 125). Doctorate biological scientists who are teachers had the lowest median salaries - $16,200 (Table 125). Further discussion of this NSF survey is on page 23.

- The 20th annual salary survey by the *American Mathematical Society* is based on returns from 788 departments in the mathematical sciences. Table 126 presents salary ranges for doctoral degree mathematics teachers by rank and type of institution, while Table 127 shows the comparable data for non-doctorate mathematics teachers. As shown in Table 126, the number of faculty at U.S. doctorate-granting institutions increased from 4,683 to 4,742 in one academic year, but the number of women increased only from 223 to 225. The proportion of doctorate faculty in these departments who are women thus dropped from 4.8% to 4.7%. Women earned 9% of Ph.D.'s in mathematics from 1970-1976.

- The annual faculty salary survey for 1976-77 by the *American Association of Colleges of Pharmacy* shows that 1976-77 salaries of faculty in colleges of pharmacy represent a varied picture of increases, with faculty on calendar year appointments tending to fare better than those on academic year appointments.

Professors' salaries increased an average of $537 for academic year appointments and $2,803 for calendar year appointments, up 2.3% and 10.3% respectively. Average salaries were $24,087 and $30,022 for academic and calendar years. Associate professors received increases of 3.5% and 5.9% for academic and calendar year appointments with average salaries at $19,530 and $23,400 respectively. For assistant professors, the increases were 1.9% and 5.9% to average salaries of $17,206 and $19,811.

Table 128 presents calendar year salaries of faculty in colleges of pharmacy by years in rank and academic rank for 1976-77.

By discipline, hospital pharmacy paid the highest salaries to professors and assistant professors, while pharmacy paid the best to associate professors and pharmacy administration shows the highest average for instructors (Table 129).

- The *Engineering Manpower Commission*, as part of its collection of data for the professional income of engineers survey, compiled data on the *SALARIES OF ENGINEERS IN EDUCATION*. The 304 educational institutions providing data covered 13,094 engineering educators. Table 130 presents salaries of engineering faculty by rank and type of institution for 1976, while Tables 131 and 132 show salaries by rank and selected years since baccalaureate for those on nine and 12-month contracts respectively.

- Preliminary data released by the *National Center for Education Statistics* on mean salaries of administrative positions in higher education for 1976-77 show a high average salary of $27,448 paid to the chief academic officer and a low average salary of $11,956 paid to the Director of Student Financial Aid and the Bookstore Manager (Table 133).

- Similar data on median salaries paid to administrative officers for 1975-76 compiled by the *College and University Personnel Association* found that the Dean of Medicine received the highest salary - $52,000, while the Registrar received the lowest, $17,568 (Table 134).

- As a supplement to their salary survey, the *College and University Personnel Association* analyzed the data by sex and minority status. Salary differentials are more consistently related to sex than to race, with women (both white and minority) being paid only about 80% as much as men with the same job title when employed by the same type of institution (Tables 135-137).

In contrast, though employed predominantly in the lower-paying positions, minority men were generally paid about the same as white men holding the same job title at the same type of institution.

The percentages of jobs held by women and minorities generally decrease as salaries increase, except at women's colleges and minority institutions. Generally, public institutions pay higher salaries to administrators of all four race and sex groups than do private institutions (Table 135). Interestingly, among those serving as affirmative action officers, men are paid more than women.

- The *U. S. Department of Health, Education and Welfare* in its *DIGEST OF EDUCATION STATISTICS, 1976* presents estimated average annual salary of instructional staff in public elementary and secondary day schools by state. Salaries ranged from a high in Alaska of $16,903 to a low in Mississippi of $8,338 (Table 138).

SOURCE: American Association of University Professors, No Progress This Year: Report on the Economic Status of the Profession, 1976-77.

TABLE 115

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION AND SEX, 1976-77

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEPENDENT		CHURCH-RELATED	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$25,710	$23,050	$25,090	$22,760	$28,130	$24,790	$23,920	$21,120
Associate Prof.	18,960	18,030	18,850	18,030	19,550	18,430	18,970	17,150
Assistant Prof.	15,610	14,700	15,550	14,670	15,700	14,890	16,090	14,520
Instructor	12,560	11,700	12,330	11,620	12,920	11,980	13,440	12,360
All Ranks	20,420	15,680	20,030	15,550	22,310	16,290	19,130	15,160
CATEGORY II-A								
Professor	22,990	22,440	23,360	22,880	22,300	20,700	20,420	18,400
Associate Prof.	18,250	17,740	18,540	18,220	17,650	16,450	16,660	14,980
Assistant Prof.	15,060	14,510	15,250	14,820	14,660	13,680	14,140	12,950
Instructor	12,200	11,720	12,340	11,890	11,790	11,340	11,500	10,750
All Ranks	18,340	15,690	18,640	16,100	17,670	14,510	16,600	13,330
CATEGORY II-B								
Professor	20,060	19,250	20,900	20,080	21,430	20,690	18,540	17,010
Associate Prof.	15,980	15,100	17,250	16,480	16,420	15,650	15,010	14,120
Assistant Prof.	13,500	12,940	14,520	14,140	13,620	13,070	12,850	12,250
Instructor	11,470	10,810	12,170	11,450	11,500	10,990	10,900	10,290
All Ranks	15,870	13,440	16,390	14,090	16,670	14,200	14,960	12,520
CATEGORY III								
Professor	22,390	21,200	22,500	21,510	15,150	°	14,040	°
Associate Prof.	18,470	18,250	18,560	18,320	14,030	13,230	13,760	13,210
Assistant Prof.	15,630	15,430	15,710	15,500	12,170	11,870	11,670	11,040
Instructor	12,700	12,130	12,750	12,200	10,320	10,540	11,050	11,190
All Ranks	17,180	15,470	17,270	15,570	12,460	11,220	12,460	11,480
CATEGORY IV								
No Rank	17,590	15,770	17,870	16,130	13,610	11,460	13,610	10,480

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions with academic rank; and Category IV - includes institutions without academic ranks.

° Sample too small to be meaningful.

SOURCE: American Association of University Professors, No Progress This Year: Report on the Economic Status of the Profession, 1976-77.

TABLE 116

WEIGHTED AVERAGE FACULTY COMPENSATION BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION AND SEX, 1976-77
(Standard Academic Year Basis)

ACADEMIC RANK	All Combined		Public		Private Independent		Church-Related	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$29,410	$25,820	$28,460	$25,220	$32,990	$28,830	$27,300	$24,090
Associate Prof.	21,720	20,710	21,510	20,640	22,820	21,470	21,830	19,740
Assistant Prof.	17,950	16,940	17,850	16,900	18,250	17,270	18,370	16,620
Instructor	14,470	13,460	14,240	13,380	14,830	13,790	14,640	13,950
All Ranks	23,400	17,960	22,820	17,780	26,080	18,910	21,900	17,320
CATEGORY II-A								
Professor	26,640	26,030	27,060	26,550	26,010	24,060	23,540	21,180
Associate Prof.	21,240	20,670	21,580	21,240	20,570	19,200	19,290	17,250
Assistant Prof.	17,490	16,840	17,740	17,230	16,940	15,790	16,240	14,860
Instructor	14,070	13,490	14,290	13,770	13,470	12,810	12,970	12,060
All Ranks	21,290	18,210	21,660	18,730	20,540	16,760	19,120	15,260
CATEGORY II-B								
Professor	23,420	22,450	23,700	22,780	25,240	24,400	21,690	19,740
Associate Prof.	18,580	17,500	19,680	18,940	19,290	18,330	17,500	16,300
Assistant Prof.	15,550	14,930	16,590	16,280	15,810	15,220	14,780	14,050
Instructor	13,050	12,260	14,000	13,170	13,070	12,420	12,290	11,560
All Ranks	18,400	15,490	18,700	16,210	19,510	16,530	17,360	14,340
CATEGORY III								
Professor	26,220	24,900	26,350	25,030	17,190	°	16,220	°
Associate Prof.	21,620	21,330	21,740	21,410	16,120	15,490	15,840	14,700
Assistant Prof.	18,430	18,160	18,540	18,260	13,910	13,420	13,320	12,160
Instructor	14,870	14,120	14,950	14,230	11,340	11,580	12,730	12,920
All Ranks	20,170	18,120	20,290	18,260	14,150	12,550	14,540	12,860
CATEGORY IV								
No Rank	19,970	17,910	20,260	18,320	16,000	13,110	13,330	12,050

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions; and Category IV - includes institutions without academic ranks.

° Sample too small to be meaningful.

SOURCE: American Association of University Professors, No Progress This Year: Report on the Economic Status of the Profession, 1976-77.

TABLE 117

WEIGHTED AVERAGE FACULTY SALARIES BY REGION[1], CATEGORY[2], AND ACADEMIC RANK, 1976-77

ACADEMIC RANK	WEST		NORTH CENTRAL		NORTH EAST		SOUTH		
	Pacific	Mountain	West N. Central	East N. Central	Middle Atlantic	New England	West S. Central	East S. Central	South Atlantic
CATEGORY I									
Professor	$27,150	$23,830	$24,240	$25,660	$28,140	$27,420	$23,830	$22,830	$25,120
Assoc. Prof.	19,320	18,430	18,710	18,980	20,160	18,990	18,440	17,940	18,680
Ass't. Prof.	15,930	15,180	15,890	15,570	15,790	15,920	15,080	14,680	15,250
Instructor	13,130	12,410	12,620	12,130	12,270	13,770	11,890	11,380	12,090
All Ranks	21,600	18,900	19,290	19,900	21,020	20,780	18,390	17,630	18,710
CATEGORY II-A									
Professor	23,930	20,130	20,270	21,850	25,350	22,030	20,130	19,500	20,400
Assoc. Prof.	18,280	16,960	16,830	17,740	20,040	17,500	16,970	16,370	16,770
Ass't. Prof.	15,090	14,280	14,440	14,950	15,890	14,490	14,430	13,840	14,040
Instructor	12,160	12,050	11,770	12,380	12,880	11,910	11,480	11,410	11,460
All Ranks	19,340	16,400	16,100	17,210	19,390	16,840	15,830	15,070	15,680
CATEGORY II-B									
Professor	20,170	19,730	18,270	19,470	21,360	21,160	17,100	16,030	18,830
Assoc. Prof.	15,520	15,880	14,830	15,590	16,960	15,880	14,550	13,310	15,200
Ass't. Prof.	13,570	13,780	12,720	13,130	13,850	13,330	13,010	11,500	12,870
Instructor	12,020	11,350	11,060	11,150	11,410	11,120	10,450	9,700	10,630
All Ranks	15,950	15,220	14,160	15,160	16,020	15,560	13,720	12,710	14,280
CATEGORY III									
Professor	21,630	16,500	*	21,690	23,640	18,050	17,310	14,900	21,160
Assoc. Prof.	22,450	15,530	14,040	19,010	19,250	15,550	15,740	13,810	17,260
Ass't. Prof.	18,560	13,420	12,910	15,920	16,200	13,380	14,110	12,370	13,710
Instructor	15,660	11,320	11,440	13,410	12,860	11,090	12,300	10,980	11,400
All Ranks	20,090	14,160	12,560	16,500	17,510	14,150	14,140	12,250	14,650
CATEGORY IV.									
No Rank	19,970	14,950	14,070	16,610	12,670	11,960	13,450	11,750	13,180

[1] Regions Included: Pacific, Mountain, West North Central, East North Central, Middle Atlantic, New England, West South Central, East South Central and South Atlantic.

[2] Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions with academic ranks; and Category IV - includes institutions without academic ranks.

* Sample too small to be meaningful.

SOURCE: American Association of University Professors, No Progress This Year: Report on the Economic Status of the Profession, 1976-77.

TABLE 118

NUMBER, AVERAGE SALARY, FRINGE BENEFITS AND COMPENSATION OF FULL-TIME FACULTY MEMBERS IN INSTITUTIONS OF HIGHER EDUCATION BY RANK, 1976-77

ACADEMIC RANK	Total Full-Time Faculty Members	Average Salary	Average Fringe Benefits	Average Compensation	Fringe Benefits As a % of Average Comp.
Professor	84,890	$23,930	$3,610	$27,540	15.1
Associate Professor	86,452	18,100	2,790	20,890	15.4
Assistant Professor	98,813	14,820	2,290	17,110	15.5
Instructor	33,118	11,920	1,770	13,690	14.8
Lecturer	4,048	13,830	2,330	16,160	16.8
All Ranks	307,321	17,930	2,740	20,670	15.3

TABLE 119

WEIGHTED AVERAGE FACULTY SALARIES AND COMPENSATION IN PRECLINICAL DEPARTMENTS OF MEDICAL SCHOOLS BY TYPE OF AFFILIATION AND ACADEMIC RANK, 1976-77[1]

(12-MONTH BASIS)

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEPENDENT		CHURCH-RELATED	
	Salary	Compen-sation	Salary	Compen-sation	Salary	Compen-sation	Salary	Compen-sation
Professor	$34,140	$39,250	$33,900	$38,810	$35,160	$40,960	$29,690	$32,880
Associate Professor	26,290	30,030	25,930	29,530	27,010	31,400	23,790	26,640
Assistant Professor	20,790	23,910	20,840	23,820	20,790	24,250	19,980	22,600
Instructor	15,770	18,100	15,760	18,050	15,750	18,200	16,270	18,050
All Ranks	26,230	30,130	26,230	29,970	26,540	30,910	23,560	26,360

TABLE 120

NUMBER, AVERAGE SALARY, FRINGE BENEFITS AND COMPENSATION OF FULL TIME FACULTY MEMBERS IN PRECLINICAL DEPARTMENTS OF MEDICAL SCHOOLS BY ACADEMIC RANK, 1976-77

ACADEMIC RANK	Total Full-Time Faculty Members	Average Salary	Average Fringe Benefits	Average Compensation	Fringe Benefits As a % of Average Comp.
Professor	1,764	$36,140	$5,110	$39,250	13.0
Associate Professor	1,684	26,290	3,740	30,030	12.5
Assistant Professor	1,944	20,790	3,120	23,910	13.0
Instructor	316	15,770	2,330	18,100	12.9
All Ranks	5,708	26,230	3,900	30,130	12.9

[1]Sample includes 90 institutions (30 Private, 55 Public, and 5 Church-Related).

SOURCE: Preliminary Data, National Center for Education Statistics

TABLE 121

MEAN FACULTY SALARIES BY TYPE OF INSTITUTION, RANK AND SEX, 1976-77

All Institutions	Total	% Change from 1975-76	Univ.	4-year Colleges	2-year Colleges
Total	$17,456	+4.9%	$19,584	$16,517	$16,503
Men	18,269	+5.1	20,413	17,219	17,097
Women	15,039	+5.2	15,840	14,450	15,371
Professor	23,597	+4.4	25,845	21,827	20,743
Men	23,828	+4.2	25,973	21,982	20,948
Women	21,512	+6.2	23,889	20,707	20,037
Associate Professor	17,864	+4.9	18,869	17,187	18,083
Men	18,003	+4.9	18,952	17,331	18,197
Women	17,211	+5.4	18,337	16,559	17,770
Assistant Professor	14,609	+4.6	15,287	14,183	14,858
Men	14,815	+4.7	15,425	14,414	15,039
Women	14,134	+4.6	14,910	13,669	14,535
Instructor	11,864	+5.5	11,868	11,626	12,441
Men	12,234	+5.9	12,297	11,960	12,810
Women	11,501	+5.4	11,484	11,299	12,040
Lecturer	12,668	-1.7	13,369	11,805	12,426
Men	13,245	-2.4	14,049	12,348	12,591
Women	11,838	-0.3	12,342	11,073	12,189
Not Ranked	16,585	+5.5	12,352	12,156	16,891
Men	17,211	+5.9	13,030	12,848	17,496
Women	15,403	+5.4	11,488	10,982	15,737

SOURCE: National Center for Education Statistics, Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1975-76.

TABLE 122

MEAN SALARIES OF FULL-TIME INSTRUCTIONAL FACULTY IN HIGHER EDUCATION BY ACADEMIC RANK, LENGTH OF CONTRACT AND SEX, 1974-75 AND 1975-76

ACADEMIC RANK & LENGTH OF CONTRACT	MEN			WOMEN		
	1974-75	1975-76	Percent Change	1974-75	1975-76	Percent Change
9 - 10 Month Contracts						
Professor	$21,518	$22,866	6.3%	$19,012	$20,257	6.5%
Associate Professor	16,261	17,167	5.6	15,481	16,336	5.5
Assistant Professor	13,452	14,154	5.2	12,857	13,506	5.0
Instructor	13,351	14,440	8.2	11,740	12,580	7.2
Lecturer	13,231	13,577	2.6	11,543	11,870	2.8
Undesignated Rank	14,008	15,764	12.5	12,619	14,098	11.7
All Ranks Combined	16,290	17,388	6.7	13,470	14,292	6.1
11 - 12 Month Contracts						
Professor	25,608	27,108	5.9	22,571	24,563	8.8
Associate Professor	21,144	21,751	2.9	19,118	20,495	7.2
Assistant Professor	17,035	18,176	6.7	15,795	16,937	7.2
Instructor	13,791	14,577	5.7	12,719	13,589	6.8
Lecturer	16,672	17,418	4.5	15,516	15,872	2.3
Undesignated Rank	14,689	14,927	1.6	13,365	13,793	3.2
All Ranks Combined	19,979	21,013	5.2	15,528	16,658	7.3

SOURCE: National Center for Education Statistics, Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1975-76.

TABLE 123

MEAN COMPENSATION OF FULL-TIME INSTRUCTIONAL FACULTY IN HIGHER EDUCATION BY INSTITUTIONAL CONTROL, LENGTH OF CONTRACT AND ACADEMIC RANK, 1972-73 AND 1975-76

ACADEMIC RANK & LENGTH OF CONTRACT	ALL INSTITUTIONS			PUBLIC INSTITUTIONS			PRIVATE INSTITUTIONS		
	1972-73	1975-76	% Change	1972-73	1975-76	% Change	1972-73	1975-76	% Change
9 - 10 Month Contracts									
Professor	$21,822	$26,025	19.3%	$21,869	$26,238	20.0%	$21,732	$25,599	17.8%
Associate Professor	16,625	19,672	18.3	16,914	20,169	19.2	15,992	18,508	15.7
Assistant Professor	13,709	16,141	17.7	13,985	16,606	18.7	13,092	15,104	15.4
Instructor	12,118	15,702	29.6	12,541	16,410	30.8	10,431	11,945	14.5
Lecturer	13,298	14,918	12.2	13,738	15,164	10.4	11,634	14,051	20.8
Undesignated Rank	14,072	17,421	23.8	14,566	18,299	25.6	11,533	13,735	19.1
All Ranks Combined	15,748	19,172	21.7	15,847	19,456	22.8	15,461	18,432	19.2
11 - 12 Month Contracts									
Professor	$25,574	$30,828	20.5%	$26,212	$32,118	22.5%	$23,860	$26,218	9.9%
Associate Professor	20,016	24,838	24.1	20,560	26,017	26.5	18,651	20,576	10.3
Assistant Professor	16,781	20,704	23.4	17,268	21,617	25.2	15,591	17,369	11.4
Instructor	13,363	16,343	22.3	13,573	16,862	24.2	12,419	13,584	9.4
Lecturer	15,671	19,876	26.8	16,178	20,228	25.0	12,531	16,811	34.2
Undesignated Rank	14,317	16,782	17.2	14,502	17,243	18.9	13,910	14,745	6.0
All Ranks Combined	18,840	23,045	22.3	19,195	23,847	24.2	17,747	19,838	11.8

SOURCE: National Center for Education Statistics, Salaries, Tenure, and Fringe Benefits of Full-Time Institutional Faculty in Institutions of Higher Education, 1975-76

TABLE 124

MEAN SALARIES OF FULL-TIME INSTRUCTIONAL FACULTY (ALL RANKS COMBINED ON 9-10 MONTH CONTRACTS) IN INSTITUTIONS OF HIGHER EDUCATION BY SEX OF FACULTY MEMBERS AND STATE, 1975-76

STATE OR OTHER AREA	PUBLIC AND PRIVATE			
	Men		Women	
	Number	Salary	Number	Salary
Alabama	2,369	$14,665	1,275	$12,307
Alaska	308	25,044	108	23,876
Arizona	2,898	18,370	860	14,891
Arkansas	1,508	14,560	616	11,964
California	27,444	20,146	7,936	17,771
Colorado	3,885	16,783	982	13,541
Connecticut	4,099	18,308	1,172	14,623
Delaware	638	17,520	237	13,618
District of Columbia	2,033	18,533	902	14,996
Florida	5,950	15,818	2,073	13,478
Georgia	4,408	14,905	1,730	12,321
Hawaii	1,081	19,725	395	15,979
Idaho	1,034	15,070	237	13,056
Illinois	12,902	18,015	4,076	14,899
Indiana	5,542	16,754	1,546	13,570
Iowa	3,315	15,969	1,046	13,140
Kansas	3,163	15,494	866	12,614
Kentucky	2,874	15,438	1,057	12,509
Louisiana	3,397	15,409	1,422	12,483
Maine	1,225	14,833	302	12,305
Maryland	3,851	17,662	1,682	15,163
Massachusetts	9,666	18,731	3,105	14,735
Michigan	7,964	18,207	2,270	15,185
Minnesota	3,307	16,716	946	13,704
Mississippi	1,925	14,285	1,135	11,960
Missouri	4,747	16,093	1,526	13,125
Montana	943	15,948	209	13,126
Nebraska	1,996	15,119	495	12,422
Nevada	449	17,742	112	15,306
New Hampshire	1,194	16,413	297	12,909
New Jersey	5,073	$17,731	1,954	$15,063
New Mexico	1,293	16,798	336	13,466
New York	18,439	19,107	5,694	15,547
North Carolina	5,439	15,918	2,280	12,329
North Dakota	901	15,274	287	12,927
Ohio	9,401	17,070	2,638	13,791
Oklahoma	2,542	14,882	895	12,507
Oregon	3,312	16,722	910	14,230
Pennsylvania	12,314	18,200	3,359	14,856
Rhode Island	1,467	17,321	488	14,210
South Carolina	3,060	14,597	1,164	11,640
South Dakota	847	14,006	267	11,900
Tennessee	4,553	15,455	1,538	12,043
Texas	12,354	16,515	4,540	13,634
Utah	1,575	16,776	321	13,318
Vermont	897	15,184	266	12,403
Virginia	5,855	15,850	2,103	12,803
Washington	4,764	16,922	1,353	14,345
West Virginia	1,683	14,411	717	12,196
Wisconsin	6,515	17,037	1,858	14,627
Wyoming	635	16,787	152	13,640
50 STATES & D.C.	229,034	17,387	73,735	14,292
American Samoa	26	7,865	15	7,760
Canal Zone	25	21,754	6	17,481
Guam	102	14,676	45	14,037
Puerto Rico	1,472	14,631	1,269	12,429
Trust Terr., Pac. Is. Virgin Islands	37	14,357	27	14,493
OUTLYING AREAS	1,662	14,629	1,362	12,494
AGGREGATE U.S.	231,207	17,380	75,102	14,259

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309.

TABLE 125

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1975

FIELD AND SALARY BASE	Total	ACADEMIC RANK						No Report
		Professor	Associate Professor	Assistant Professor	Instructor	Lecturer	Other	
All Fields								
Academic Year	$17,200	$21,700	$16,600	$13,300	$12,500	$13,100	$16,200	*
Calendar Year	21,700	26,500	20,700	17,300	15,000	16,800	20,900	$19,300
Physical Scientists								
Academic Year	17,100	20,800	16,200	13,000	*	*	*	*
Calendar Year	21,700	25,900	20,400	15,900	*	*	20,000	*
Chemists								
Academic Year	16,600	20,000	15,900	12,900	*	*	*	*
Calendar Year	21,900	25,000	20,500	16,300	*	*	20,600	*
Physicists & Astronomers								
Academic Year	17,700	21,700	16,400	13,200	*	*	*	*
Calendar Year	21,200	28,700	20,300	15,600	*	*	*	*
Mathematical Scientists								
Academic Year	16,900	22,500	16,700	13,400	*	*	*	*
Calendar Year	19,200	24,600	18,200	14,800	*	*	*	*
Mathematicians								
Academic Year	16,800	22,300	16,600	13,400	*	*	*	*
Calendar Year	18,800	24,400	18,200	14,200	*	*	*	*
Statisticians								
Academic Year	17,800	23,800	17,300	13,900	*	*	*	*
Calendar Year	20,700	*	*	*	*	*	*	*
Computer Specialists								
Academic Year	18,000	23,000	18,200	13,900	*	*	*	*
Calendar Year	24,700	30,500	*	*	*	*	*	*
Environmental Scientists								
Academic Year	17,100	20,900	16,300	13,200	*	*	*	*
Calendar Year	21,200	25,400	20,700	16,400	*	*	*	*
Earth Scientists								
Academic Year	16,900	20,700	16,100	13,100	*	*	*	*
Calendar Year	21,400	25,200	21,000	16,500	*	*	*	*
Oceanographers								
Academic Year	18,100	*	*	*	*	*	*	*
Calendar Year	19,800	*	19,500	*	*	*	*	*
Atmospheric Scientists								
Academic Year	17,800	*	*	*	*	*	*	*
Calendar Year	*	*	*	*	*	*	*	*

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed only for full-time employed civilians.

* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309.

TABLE 125 (Continued)

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1975

FIELD AND SALARY BASE	Total	ACADEMIC RANK						No Report
		Professor	Associate Professor	Assistant Professor	Instructor	Lecturer	Other	
Engineers								
Academic Year	$18,900	$22,400	$17,700	$14,800	*	*	*	*
Calendar Year	24,300	28,400	21,800	18,500	*	*	*	*
Life Scientists								
Academic Year	16,400	20,600	16,000	13,000	*	*	*	*
Calendar Year	21,500	26,600	20,800	17,700	14,800	*	$18,400	*
Biological Scientists								
Academic Year	16,200	20,600	15,900	13,000	*	*	*	*
Calendar Year	21,100	27,100	20,900	17,600	14,600	*	16,500	
Agricultural Scientists								
Academic Year	18,200	20,800	18,000	*	*	*	*	*
Calendar Year	20,600	24,200	19,600	17,000	*	*	*	*
Medical Scientists								
Academic Year	18,700	21,000	17,500	15,000	*	*	*	*
Calendar Year	24,100	30,100	23,000	18,800	*	*	*	*
Psychologists								
Academic Year	16,900	21,700	16,400	13,000	*	*	*	*
Calendar Year	21,300	25,900	20,700	17,000	*	*	*	*
Social Scientists								
Academic Year	17,300	22,200	16,700	13,400	*	*	*	*
Calendar Year	21,000	26,000	19,600	15,500	*	*	25,400	
Economists								
Academic Year	18,400	22,800	17,400	14,600	*	*	*	*
Calendar Year	22,200	25,800	21,700	18,400	*	*	*	*
Sociologists/Anthropologists								
Academic Year	16,800	22,300	16,600	13,200	*	*	*	*
Calendar Year	20,400	25,900	20,300	14,200	*	*	*	*
Other Social Scientists								
Academic Year	16,800	21,800	16,400	13,100	*	*	*	*
Calendar Year	20,200	26,400	18,700	15,000	*	*	*	*

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed only for full-time employed civilians.

* No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: The American Mathematical Society NOTICES, Vol. 23, No. 6, Issue No. 172, October 1976, pp. 313-316.

TABLE 126

NUMBER AND MEDIAN SALARY RANGES FOR DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1975-76 AND 1976-77

TYPE OF INSTITUTION	RANK	1976 - 1977 NUMBER OF FACULTY Total	1976 - 1977 NUMBER OF FACULTY Women	1976 - 1977 MEDIAN RANGES	1975 - 1976 NUMBER OF FACULTY Total	1975 - 1976 NUMBER OF FACULTY Women	1975 - 1976 MEDIAN RANGES
Doctorate Granting Departments GROUP I*	Instructor	58	3	$12,300-14,000	61	8	$11,600-13,500
	Assistant Professor	166	17	14,000-15,900	170	16	13,100-15,500
	Associate Professor	171	7	18,000-20,000	183	6	17,200-18,500
	Professor	546	9	26,400-30,500	524	9	25,400-31,000
Doctorate Granting Departments GROUP II*	Instructor	55	6	11,400-12,500	45	5	11,000-12,500
	Assistant Professor	240	14	13,900-15,400	253	19	13,600-15,600
	Associate Professor	361	12	18,100-20,100	358	12	17,100-19,100
	Professor	438	10	25,900-28,800	427	10	24,600-27,500
Doctorate Granting Departments GROUP III*	Instructor	23	4	10,000-12,400	30	4	9,300-11,100
	Assistant Professor	432	39	14,000-15,600	477	39	13,600-15,000
	Associate Professor	676	29	17,700-19,200	645	24	17,100-18,800
	Professor	599	21	22,500-26,700	556	24	22,000-25,300
Doctorate Granting Departments GROUP IV*	Instructor	4	1	-	2	1	-
	Assistant Professor	127	19	14,500-16,300	118	14	13,500-15,600
	Associate Professor	124	7	18,100-21,400	131	6	17,600-20,200
	Professor	204	6	26,400-30,200	197	6	25,600-29,000
Doctorate Granting Departments GROUP V*	Instructor	4	1	-	8	1	-
	Assistant Professor	203	12	15,000-17,100	201	11	14,500-16,200
	Associate Professor	123	4	19,500-21,600	115	4	18,300-20,500
	Professor	188	4	25,800-30,000	182	4	24,300-27,800
Doctorate Granting Departments GROUP VI*	Instructor	2	0	-	0	0	-
	Assistant Professor	156	7	15,400-18,400	165	9	14,500-17,400
	Associate Professor	261	6	19,700-24,100	253	5	17,700-22,300
	Professor	176	0	24,700-32,000	163	0	22,600-30,700
Master's Degree Granting Departments	Instructor	24	6	11,200-14,200	25	9	12,000-13,700
	Assistant Professor	646	72	13,900-15,900	670	68	13,500-15,100
	Associate Professor	890	68	16,800-19,000	844	67	16,200-19,000
	Professor	658	37	20,500-23,100	611	34	19,600-23,100
Bachelor's Degree Granting Departments	Instructor	13	6	-	10	2	-
	Assistant Professor	481	55	12,500-14,500	482	45	12,000-13,800
	Associate Professor	418	30	14,400-17,600	384	30	14,000-16,800
	Professor	367	32	17,300-23,400	352	37	16,500-22,100

*See footnote to Table 127

SOURCE: The American Mathematical Society NOTICES, Vol. 23, No. 6, Issue No. 172, October 1976, pp. 313-316

TABLE 127

NUMBER AND MEDIAN SALARY RANGES FOR NON-DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1975-76 AND 1976-77

TYPE OF INSTITUTION	NON-PH.D. DEGREE RANK	1976 - 1977 NUMBER OF FACULTY		1976 - 1977 MEDIAN RANGES	1975 - 1976 NUMBER OF FACULTY		1975 - 1976 MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting Departments GROUP II*	Instructor	21	8	$10,900-14,600	28	11	$ 9,900-13,600
	Assistant Professor	8	1	-	8	2	-
	Associate Professor	3	0	-	4	0	-
Doctorate Granting Departments GROUP III*	Instructor	59	23	9,400-12,400	65	27	9,000-11,800
	Assistant Professor	90	26	13,700-15,800	94	28	12,900-15,800
	Associate Professor	67	5	16,900-19,800	69	6	15,500-18,300
	Professor	21	0	18,700-28,500	20	1	18,200-31,000
Doctorate Granting Departments GROUP VI*	Instructor	11	4	-	5	2	-
	Assistant Professor	16	5	-	21	5	-
	Associate Professor	29	3	20,300-26,200	26	3	18,200-23,700
	Professor	9	0	-	7	0	-
Master's Degree Granting Departments	Instructor	180	72	10,500-12,800	200	81	9,800-12,300
	Assistant Professor	333	92	13,000-15,600	353	90	12,500-14,800
	Associate Professor	219	32	15,400-18,100	222	28	14,300-17,200
	Professor	55	4	19,100-24,600	54	2	18,000-22,900
Bachelor's Degree Granting Departments	Instructor	109	37	-	123	47	-
	Assistant Professor	278	65	11,700-14,700	301	63	11,100-13,900
	Associate Professor	223	27	13,100-17,100	219	28	12,700-16,000
	Professor	108	11	16,000-21,300	106	10	15,000-20,600

* Group I and Group II include the leading departments of mathematics in the U.S. as rated by the American Council of Education in 1969 in "A Rating of Graduate Programs" by Kenneth D. Roose and Charles J. Andersen, in which departments were ranked according to the quality of their graduate faculty. Group I is composed of the 27 departments ranked highest; Group II is made up of the other 38 leading departments listed in that report. Group III contains all other U.S. departments of mathematics. Group IV includes U.S. departments of statistics, biostatistics and biometrics. Group V includes all other U.S. departments in the mathematical sciences. Group VI consists of all departments in the mathematical sciences from Canadian universities.

SOURCE: American Association of Colleges of Pharmacy, Annual Survey of Faculty Salaries, 1976-77.

TABLE 128

NUMBER AND AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY YEARS IN RANK AND ACADEMIC RANK, 1976-77

Years In Rank	ACADEMIC RANK				
	Professor	Associate Professor	Assistant Professor	Dean	Assistant/Associate Dean
0-1	(25) $26,996	(78) $22,405	(178) $18,788	(6) $35,422	(6) $25,116
2-5	(89) 28,169	(137) 23,975	(236) 20,346	(18) 33,698	(23) 25,893
6-10	(73) 29,918	(40) 22,983	(13) 21,760	(17) 37,179	(8) 25,588*
11-15	(43) 31,547	(10) 22,798*		(19) 36,975*	
16-20	(27) 31,912				
21+	(14) 33,115				

* Includes All Years Beyond

TABLE 129

AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY DISCIPLINE AND ACADEMIC RANK, 1976-77

	ACADEMIC RANK			
	Professor	Associate Professor	Assistant Professor	Instructors
Pharmacy	$30,265	$23,964	$20,823	$15,811
Pharmaceutical Chemistry	30,645	22,891	19,412	11,586
Pharmacology	29,438	22,547	19,237	12,881
Pharmacognosy	29,226	23,584	19,585	-
Pharmacy Administration	28,584	24,543	20,286	17,504
Clinical Pharmacy	30,317	23,859	19,753	17,218
Hospital Pharmacy	31,174	21,071	21,040	-

SOURCE: Engineering Manpower Commission, Salaries of Engineers in Education, 1976

TABLE 130

NUMBER AND MEDIAN SALARIES OF ENGINEERING FACULTY BY RANK, TYPE OF INSTITUTION AND MONTHS ON CONTRACT, 1976

TYPE OF INSTITUTION	Instructor	Assistant Professor	Associate Professor	Professor	Administrator	Researcher
PH.D. SCHOOLS						
9-10 Month Contract	(251) $13,600	(1,432) $16,200	(2,504) $19,500	(3,305) $24,900	(257) $27,700	(76) $16,900
11-12 Month Contract	(6) 18,500	(192) 19,850	(276) 23,950	(378) 29,300	(547) 32,500	(737) 18,250
NON-PH.D. SCHOOLS						
9-10 Month Contract	(69) 14,550	(313) 15,600	(544) 18,550	(545) 24,050	(63) 20,100	(18) 14,500
11-12 Month Contract	(9) 12,400	(24) 15,000	(44) 23,950	(28) 27,650	(124) 28,000	(29) 15,750
TECHNICAL SCHOOLS						
9-10 Month Contract	(252) 13,450	(307) 15,500	(295) 17,850	(127) 21,150	(48) 16,900	(3) -
11-12 Month Contract	(18) 15,650	(15) 15,900	(18) 17,000	(14) 15,350	(116) 22,100	(14) -

TABLE 131

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS BY NINE-MONTH CONTRACT, RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1976

RANK	YEARS SINCE BACCALAUREATE								
	3	5	7	9-11	15-17	18-20	21-23	24-26	35+
Professors				(11) $20,850	(315) $22,950	(534) $23,850	(509) $24,650	(501) $25,300	(734) $25,450
Associate Professors			(8) $17,650	(253) 18,650	(593) 19,650	(487) 19,750	(284) 19,650	(234) 19,450	(189) 18,450
Assistant Professors	(8) $14,850	(51) $15,350	(128) 15,800	(477) 16,250	(154) 16,600	(78) 16,500	(71) 16,350	(42) 16,150	(49) 15,350
Instructors	(13) 11,600	(17) 12,450	(14) 13,150	(51) 14,100	(22) 15,350	(22) 15,700	(14) 16,000	(19) 16,150	(17) 16,400
Administrators				(4) -	(28) 22,200	(45) 24,950	(44) 26,800	(41) 27,900	(43) 29,150
All Faculty	(12) 14,150	(64) 15,000	(153) 15,900	(810) 17,200	(1,154) 19,750	(1,187) 20,850	(928) 21,800	(854) 22,550	(1,069) 22,950

SOURCE: Engineering Manpower Commission, Salaries of Engineers in Education, 1976

TABLE 132

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS BY 12-MONTH CONTRACT, RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1976

RANK	YEARS SINCE BACCALAUREATE								
	3	5	7	9-11	15-17	18-20	21-23	24-26	35+
Professors				(7) $24,250	(41) $27,300	(51) $28,600	(43) $29,650	(60) $30,300	(74) $28,400
Associate Professors			(2)	(35) 22,650	(63) 24,100	(40) 24,500	(37) 24,600	(25) 24,450	(16) 20,700
Assistant Professors			(13) $18,950	(40) 19,450	(21) 19,800	(15) 19,750	(13) 19,550	(15) 19,350	
Administrators	(1) -	(1) -	(3) -	(6) 23,100	(46) 28,600	(70) 30,350	(100) 31,550	(101) 32,300	(101) 33,200
Researchers	(37) $12,750	(22) $14,150	(39) $15,500	(121) $17,350	(74) $20,100	(56) $20,950	(53) $21,550	(32) $21,950	(32) $22,450

SOURCE: National Center for Education Statistics, Preliminary Data

TABLE 133

NUMBER AND MEAN SALARIES OF ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION, 1976-77

POSITION	No. of Persons	Mean Salary
Chief Academic Officer	2,211	$27,448
Chief Business Officer	2,239	24,696
Chief Development Officer	1,294	23,303
Chief Student Life Officer	1,871	22,524
Director of Computer Center	1,067	20,790
Director of Student Counseling	1,095	18,965
Chief Librarian	2,192	18,791
Director of Admissions	1,826	18,723
Director of Physical Plant	1,628	17,853
Chief Public Relations Officer	1,163	17,712
Registrar	1,695	16,516
Director of Student Financial Aid	1,268	11,956
Bookstore Manager	1,268	11,956

116 SOURCE: College and University Personnel Association, reported in The Chronicle of Higher Education, February 17, 1976.

TABLE 134

NUMBER AND SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS, 1975-76

POSITION	Number of Persons	1975-76 Median Salary	Percent Increase From 1973-1974
Medicine Dean or Director	63	$52,000	24.6%
Dentistry Dean or Director	43	42,907	19.2
Law Dean or Director	87	39,200	13.6
Chief Executive Officer Within a System	255	28,175	*
Pharmacy Dean or Director	48	35,082	9.6
Chief Executive Officer	864	34,800	10.5
Engineering Dean or Director	186	33,000	17.1
Chief Health Affairs Officer	197	32,000	*
Architecture Dean or Director	60	31,645	13.8
Graduate Dean or Director	279	30,300	14.5
Executive Vice President	284	30,000	*
Agriculture Dean or Director	90	29,950	8.3
Social Work Dean or Director	116	29,000	15.1
Education Dean or Director	338	28,848	10.0
Arts and Sciences Dean or Director	416	28,000	11.0
Business Dean or Director	392	28,000	9.9
Chief Academic Officer	974	27,500	10.7
Chief Planning Officer	235	26,000	*
Extension Dean or Director	212	25,627	15.4
Staff Legal Counsel	79	25,580	9.1
Fine Arts Dean or Director	195	25,008	4.5
Chief Business Officer	1,022	24,378	10.8
Nursing Dean or Director	240	24,000	20.0
Technology Dean or Director	103	23,500	5.9
Chief Development Officer	543	22,700	13.5
Information Systems Director	126	22,351	*
Institutional Research Director	390	20,423	*
Athletic Director	592	20,000	9.9
Computer Center Director	626	19,800	11.0
Affirmative Action Officer	229	19,364	*
Comptroller	566	19,229	13.0
Director of Admissions	771	18,500	14.6
Personnel Services Director	537	18,430	16.3
Registrar	974	17,568	14.6

* Position not included in 1973-74 Survey.

SOURCE: College and University Personnel Association, Women and Minorities in Administration of Higher Education Institutions: Employment Patterns and Salary Comparisons, June 1977.

TABLE 135

AVERAGE OF MEDIAN SALARIES PAID ADMINISTRATORS AT PUBLIC AND PRIVATE INSTITUTIONS BY SEX AND MINORITY STATUS, 1975-76
(WHITE COEDUCATIONAL INSTITUTIONS)

	AVERAGE MEDIAN SALARIES		
	Public	Private	Ratio of Public To Private
White Men			
Chief Executive Officers	$35,228	$31,283	1.13
Administrative Affairs	22,251	20,221	1.10
Academic Affairs	30,779	27,152	1.13
Student Affairs	20,194	16,107	1.25
External Affairs	21,521	17,875	1.20
Minority Men			
Chief Executive Officers	$36,424	$28,316	1.29
Administrative Affairs	20,340	17,583	1.16
Academic Affairs	28,673	29,811	0.96
Student Affairs	18,871	15,422	1.22
External Affairs	23,607	20,950	1.13
White Women			
Chief Executive Officers	$29,316	$29,925	0.98
Administrative Affairs	17,093	14,816	1.15
Academic Affairs	23,355	19,061	1.23
Student Affairs	16,024	12,287	1.30
External Affairs	16,309	14,630	1.11
Minority Women			
Chief Executive Officers	$ -*	$ -*	-*
Administrative Affairs	17,952	13,745	1.31
Academic Affairs	24,991	16,349	1.53
Student Affairs	16,220	14,810	1.10
External Affairs	17,484	14,950	1.17

* Indicates data are not disclosed.

SOURCE: College and University Personnel Administration, Women and Minorities in Administration of Higher Education Institutions, Special Supplement: 1975-76 Administrative Compensation Survey, June 1977

TABLE 136

NUMBER AND MEDIAN SALARY OF ADMINISTRATORS IN ALL PRIVATE WHITE COEDUCATIONAL HIGHER EDUCATION INSTITUTIONS BY POSITION, SEX AND MINORITY STATUS, 1975-76

Position	Total Sample		White Men		Minority Men		White Women		Minority Women	
	Number	Median Salary	Number	Median Salary	Number	Median Salary	Number	Median Salary	Number	Median Salary
Chief Executive Officers										
Chief Executive Officer (President/Chancellor)	333	33,000	319	33,700	1	-	13	28,000	0	-
Chief Executive Officer within a System	5	31,650	5	31,650	0	-	0	-	0	-
Executive Vice-President	65	28,500	61	28,500	1	-	2	-	1	-
Administrative Affairs Officers										
Chief Planning Officer	37	24,000	36	24,000	0	-	1	-	0	-
Director, Computer Center	147	17,000	141	17,600	0	-	6	11,500	0	-
Director, Information Systems	29	21,400	26	22,900	0	-	3	14,700	0	-
Chief Business Officer	316	22,500	294	23,000	3	21,450	19	15,000	0	-
Chief Budgeting Officer	36	18,915	28	20,900	0	-	8	13,225	0	-
Director, Personnel Services	119	16,000	69	18,500	4	13,300	42	11,550	4	16,750
Affirmative Action Officer	22	20,200	7	20,500	7	20,400	5	18,000	3	16,200
Director, Physical Plant	293	15,100	286	15,007	6	22,100	1	-	0	-
Purchasing Agent	96	14,934	78	15,950	5	16,584	13	9,200	0	-
Director, Food Services	106	15,500	73	16,500	3	8,820	28	13,390	2	-
Comptroller	203	18,143	171	19,143	3	14,000	28	12,250	1	-
Manager, Bookstore	203	10,010	108	13,000	1	-	92	7,850	2	-
Staff Legal Counsel	13	25,500	12	25,100	0	-	1	-	0	-
Chief Health Affairs Officer	31	30,400	27	31,000	1	-	3	8,870	0	-
Academic Affairs Officers										
Chief Academic Officer	281	25,000	267	25,500	2	-	12	19,004	0	-
Head Librarian	317	16,000	191	18,500	5	21,400	120	13,593	1	-
Director, Institutional Research	61	16,896	39	16,796	0	-	11	17,765	1	-
Dean/Director, Architecture	7	28,800	7	28,800	0	-	0	-	0	-
Dean/Director, Agriculture	0	-	0	-	0	-	0	-	0	-
Dean/Director, Arts and Sciences	83	27,500	76	27,700	1	-	6	19,105	0	-
Dean/Director, Business	72	26,750	66	27,200	2	-	4	13,813	0	-
Dean/Director, Dentistry	10	47,000	10	43,400	0	-	0	-	0	-
Dean/Director, Education	66	23,085	54	22,278	1	-	11	17,600	0	-
Dean/Director, Engineering	37	30,500	36	31,075	1	-	0	-	0	-
Dean/Director, Extension	35	23,900	29	24,064	1	-	4	23,200	1	-
Dean/Director, Fine Arts	38	20,104	33	20,000	0	-	5	21,332	0	-
Dean/Director, Graduate Programs	50	26,125	42	26,875	2	-	6	23,769	0	-
Dean/Director, Home Economics	7	16,532	7	-	0	-	5	13,975	0	-
Dean/Director, Law	35	40,000	33	40,425	1	-	1	-	0	-
Dean/Director, Medicine	11	52,500	11	52,500	0	-	0	-	0	-
Dean/Director, Music	35	21,500	33	21,500	0	-	2	-	0	-
Dean/Director, Nursing	39	21,785	1	-	0	-	37	21,785	1	-
Dean/Director, Pharmacy	6	32,250	6	32,250	0	-	0	-	0	-
Dean/Director, Social Work	26	27,801	22	28,459	0	-	4	14,768	0	-
Dean/Director, Technology	5	23,000	5	23,000	0	-	0	-	0	-
Dean/Director, Vocational Education	4	14,488	4	14,488	0	-	0	-	0	-
Student Affairs Officers										
Registrar	280	14,620	171	16,850	4	-	104	11,889	4	13,123
Director, Admissions	244	16,800	211	17,275	1	-	30	13,306	2	-
Director, Student Housing	139	13,200	91	14,000	4	10,860	43	11,000	1	-
Chief Student Life Officer	250	18,487	211	18,500	8	24,241	28	16,250	3	26,000
Director, Student Union	99	13,000	69	13,800	0	-	27	10,500	3	11,000
Director, Student Placement	149	13,733	89	15,000	5	11,300	51	12,175	4	10,666
Director, Student Financial Aid	229	13,400	153	14,750	11	15,000	62	10,665	3	11,500
Director, Student Counseling	137	16,320	102	17,185	4	17,398	31	12,200	0	-
Director, Athletics	174	17,552	166	17,600	6	19,075	3	12,594	0	-
External Affairs Officers										
Director, Community Services	36	17,940	27	17,980	2	-	6	17,708	1	-
Chief Development Officer	292	22,179	276	22,500	3	24,600	13	17,760	0	-
Chief Public Relations Officer,	182	15,500	137	16,600	0	-	44	12,700	1	-
Director, Information Office	122	13,545	79	14,500	1	-	42	10,351	0	-

SOURCE: College and University Personnel Administration, Women and Minorities in Administration of Higher Education Institutions, Special Supplement: 1975-76 Administrative Compensation Survey, June 1977

TABLE 137

NUMBER AND MEDIAN SALARY OF ADMINISTRATORS IN ALL PUBLIC WHITE COEDUCATIONAL HIGHER EDUCATION INSTITUTIONS BY POSITION, SEX AND MINORITY STATUS, 1975-76

Position	Total Sample		White Men		Minority Men		White Women		Minority Women	
	Number	Median Salary	Number	Median Salary	Number	Median Salary	Number	Median Salary	Number	Median Salary
Chief Executive Officers										
Chief Executive Officer (President/Chancellor)	394	35,413	380	35,413	11	39,950	3	32,984	0	-
Chief Executive Officer within a System	178	37,805	165	38,175	10	36,521	3	30,750	0	-
Executive Vice-President	152	31,860	147	32,095	3	32,800	2	-	0	-
Administrative Affairs Officers										
Chief Planning Officer	131	27,505	129	27,720	0	-	2	-	0	-
Director, Computer Center	330	20,803	343	21,060	7	20,100	10	17,045	0	-
Director, Information Systems	78	22,375	76	22,600	1	-	0	-	1	-
Chief Business Officer	491	26,114	471	26,820	10	29,862	10	18,350	0	-
Chief Budgeting Officer	152	22,000	136	22,221	4	18,545	12	18,075	0	-
Director, Personnel Services	287	19,692	222	19,933	23	20,472	40	15,501	2	-
Affirmative Action Officer	148	19,450	26	20,294	49	21,400	48	18,182	25	19,078
Director, Physical Plant	448	19,304	433	19,308	15	18,645	0	-	0	-
Purchasing Agent	296	16,625	251	17,200	7	14,924	37	12,756	1	-
Director, Food Services	164	17,569	110	18,850	4	18,732	39	11,798	1	-
Comptroller	278	20,367	254	20,654	6	21,731	17	13,500	1	-
Manager, Bookstore	319	13,000	198	15,254	7	9,600	112	9,441	2	-
Staff Legal Counsel	48	26,334	44	26,858	1	-	2	-	1	-
Chief Health Affairs Officer	134	32,682	118	33,284	2	-	13	20,347	1	-
Academic Affairs Officers										
Chief Academic Officer	479	29,421	439	29,355	14	28,937	24	30,300	2	-
Head Librarian	509	21,650	353	23,590	7	25,570	138	18,062	11	20,500
Director, Institutional Research	226	21,650	191	22,784	9	19,950	26	16,963	0	-
Dean/Director, Architecture	42	31,500	40	31,500	1	-	1	-	0	-
Dean/Director, Agriculture	69	31,410	68	31,497	1	-	0	-	0	-
Dean/Director, Arts and Sciences	253	28,764	233	29,480	8	31,161	11	24,860	1	-
Dean/Director, Business	247	29,000	236	29,370	4	25,645	7	19,000	0	-
Dean/Director, Dentistry	31	42,950	30	43,099	0	-	1	-	0	-
Dean/Director, Education	202	30,895	179	30,790	15	31,118	7	27,492	1	-
Dean/Director, Engineering	115	33,420	112	33,420	1	-	1	-	1	-
Dean/Director, Extension	144	26,798	138	27,302	4	26,225	4	20,251	0	-
Dean/Director, Fine Arts	116	27,295	97	27,300	5	34,600	12	26,511	2	-
Dean/Director, Graduate Programs	158	32,000	141	32,100	5	33,420	12	28,089	0	-
Dean/Director, Home Economics	73	27,468	10	29,427	1	-	60	26,016	2	-
Dean/Director, Law	41	38,200	41	38,200	0	-	0	-	0	-
Dean/Director, Medicine	45	51,970	45	51,970	0	-	0	-	0	-
Dean/Director, Music	58	27,349	55	27,364	2	-	1	-	0	-
Dean/Director, Nursing	160	24,516	14	23,594	1	-	138	24,588	7	31,041
Dean/Director, Pharmacy	32	37,000	32	37,000	0	-	0	-	0	-
Dean/Director, Social Work	64	30,902	46	31,500	8	33,420	10	26,559	0	-
Dean/Director, Technology	76	23,750	73	24,000	3	22,500	0	-	0	-
Dean/Director, Vocational Education	123	22,460	115	22,500	5	23,017	2	-	1	-
Student Affairs Officers										
Registrar	455	19,740	358	20,479	9	18,500	81	13,551	7	14,653
Director, Admissions	310	20,245	272	20,400	15	18,576	21	18,704	2	-
Director, Student Housing	196	17,500	167	18,060	4	16,218	23	15,408	2	-
Chief Student Life Officer	422	25,734	350	25,843	36	26,686	33	20,120	3	27,000
Director, Student Union	254	17,731	213	18,180	14	13,631	27	15,700	0	-
Director, Student Placement	296	17,798	241	18,171	10	17,704	41	14,947	4	15,621
Director, Student Financial Aid	411	16,750	292	17,442	45	17,000	63	13,500	11	12,816
Director, Student Counseling	325	20,050	251	20,694	13	20,171	56	17,977	5	16,006
Director, Athletics	261	22,305	252	22,475	7	21,357	2	-	0	-
External Affairs Officers										
Director, Community Services	219	21,000	182	21,000	16	26,377	16	18,514	5	15,015
Chief Development Officer	139	24,981	134	24,990	4	24,957	1	-	0	-
Chief Public Relations Officer	224	20,475	186	21,381	3	19,300	34	14,700	1	-
Director, Information Office	220	17,269	154	18,714	4	23,792	60	13,834	2	-

SOURCE: U.S. Department of Health, Education & Welfare, Digest of Educational Statistics, 1976, NCES 77-401, p. 58.

TABLE 138

ESTIMATED AVERAGE ANNUAL SALARY OF TOTAL INSTRUCTIONAL STAFF* IN FULL-TIME PUBLIC ELEMENTARY AND SECONDARY DAY SCHOOLS BY STATE, 1974-75

STATE	SALARY	STATE	SALARY
United States	$12,070	Missouri	$10,257
Alabama	9,503	Montana	10,160
Alaska	16,906	Nebraska	9,715
Arizona	11,168	Nevada	12,854
Arkansas	9,021[1]	New Hampshire	10,016
California	14,915	New Jersey	+
Colorado	11,554	New Mexico	10,200
Connecticut	12,051	New York	15,000[2]
Delaware	12,110	North Carolina	11,275
District of Columbia	14,716	North Dakota	9,176
Florida	10,780	Ohio	11,100
Georgia	10,641	Oklahoma	9,208
Hawaii	13,665	Oregon	10,958
Idaho	9,573	Pennsylvania	12,200
Illinois	13,469	Rhode Island	12,885
Indiana	11,358	South Carolina	9,770
Iowa	10,598	South Dakota	8,860
Kansas	9,770	Tennessee	9,878
Kentucky	9,240	Texas	10,136
Louisiana	9,800	Utah	10,150
Maine	13,202	Vermont	9,206
Maryland	13,282	Virginia	11,279
Massachusetts	12,468	Washington	12,538
Michigan	14,224	West Virginia	9,124
Minnesota	12,852	Wisconsin	13,046
Mississippi	8,338	Wyoming	10,350

*Includes supervisors, principals, classroom teachers, and other instructional staff.

+Data not available.

[1]Includes professional-noninstructional administrative staff.

[2]Median Salary

BIBLIOGRAPHY OF SOURCES

(Listed in Alphabetical Order by Publisher)

ABBOTT, LANGER & ASSOCIATES, P. O. Box 275, Park Forest, Illinois 60466

Compensation in Manufacturing, Part I: Manufacturing Engineers, Sponsored by the Society of Manufacturing Engineers, ISBN No. 0-016506-09-6, 1976, 55 pp., $40.00

Compensation of Industrial Engineers, Sponsored by the American Institute of Industrial Engineers, Inc., ISBN No. 0-916506-19-3, June 1977, 92 pp., $40.00

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY, Office of Educational Research and Development, Suite 201, 4630 Montgomery Avenue, Bethesda, Maryland 20014

Annual Survey of Faculty Salaries, 1976-1977, 12 pp., free

AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS, One Dupont Circle, N.W., Washington, D. C. 20036

No Progress This Year: Report on the Economic Status of the Profession, 1976-77, August 1977, 83 pp., $2.50

AMERICAN CHEMICAL SOCIETY, 1155 - 16th Street, N.W., Washington, D. C. 20036

1977 Report of Chemists' Salaries and Employment Status, June 1977, 129 pp., $7.00

1976 Report of Chemists' Salaries and Employment Status, July 1976, 86 pp., $5.00

1976 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, November 1976, 40 pp., $3.00

"Salaries of Starting and Experienced Chemists Generally are Higher," CHEMICAL AND ENGINEERING NEWS, Volume 55, October 25, 1976

"1977 Salary Survey - Fewer Chemists Are Without Jobs This Year," CHEMICAL AND ENGINEERING NEWS, Volume 56, June 20, 1977

CHEMICAL AND ENGINEERING NEWS, Volume 55, June 21, 1976

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES, 1401 Wilson Boulevard, Arlington, Virginia 22209

"The Biologist Census," BIOSCIENCE, Volume 27, No. 3, March 1977

AMERICAN INSTITUTE OF PHYSICS, 335 East 45th Street, New York, New York 10017

1975-76 Graduate Student Survey, AIP Pub. No. R-207.9, July 1977, free

1974-75 Graduate Student Survey, AIP Pub. No. R-207.8, September 1976, free

Survey of 1975-76 Physics and Astronomy Bachelor's Degree Recipients, AIP Pub. No. R-211.8, February 1977, free

AMERICAN MATHEMATICAL SOCIETY, Box 6248, Providence, Rhode Island 02903

"20th Annual 1976 AMS Survey," NOTICES, Volume 23, No. 6, Issue No. 1972, October 1976

AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 East 47th Street, New York, New York 10017

1975 ASCE Salary Survey, Reprinted from ENGINEERING ISSUES, Volume 102, April 1976

BATTELLE, COLUMBUS LABORATORIES. Available from the Government Printing Office, Washington, D.C. 20402

National Survey of Compensation Paid Scientists and Engineers Engaged in Research & Development Activities, 1976, ERDA 76/157, November 1, 1976, $3.85

COLLEGE PLACEMENT COUNCIL, P. O. Box 2263, Bethlehem, Penna. 18001

A Study of 1976-77 Beginning Offers, Final Report, July 1977, 12 pp. Available to subscribers only, $35/year for three reports

COLLEGE AND UNIVERSITY PERSONNEL ASSOCIATION, One Dupont Circle, N.W., Washington, D. C. 20036

1975-76 Administrative Compensation Survey, reported in THE CHRONICLE OF HIGHER EDUCATION, February 17, 1976

Women and Minorities in Administration of Higher Education Institutions: Employment Patterns and Salary Comparisons, June 1977, 95 pp.

ENDICOTT REPORT, Placement Center, Northwestern University, Evanston, Illinois 60201

The Endicott Report, 1977, Trends in the Employment of College and University Graduates in Business and Industry, by Frank S. Endicott, 12 pp. free

ENGINEERING MANPOWER COMMISSION, 345 East 47th Street, New York, New York 10017

Professional Income of Engineers, 1976, December 1976, 92 pp., $8.00

Prospects of Engineering and Technology Graduates, 1976, January 1977, 31 pp., $10.00

Salaries of Engineering Technicians and Technologists, 1977, September 1977 (in press)

Salaries of Engineering Technicians and Technologists, 1976, Detailed Industry Report, February 1976, 128 pp., $60.00

Salaries of Engineers in Education, Special Report 1976, December 1976, 44 pp., $5.00

HITCHCOCK PUBLISHING COMPANY, Hitchcock Building, Wheaton, Illinois 60187

"Report on EDP Salaries - 1977," INFOSYSTEMS, June 1977

INDUSTRIAL RESEARCH, INC., 222 South Riverside Plaza, Chicago, Illinois 60606.

"More Money in Your Paycheck," INDUSTRIAL RESEARCH, March 1977

INSTITUTE OF FOOD TECHNOLOGISTS, Suite 2120, 211 North LaSalle Street, Chicago, Illinois 60601

"1976 Starting Salary Survey," FOOD TECHNOLOGY, January 1977

MIDDLE ATLANTIC CAREER COUNSELING ASSOCIATION, Compiled and Available from Leo A. Polinsky, Director of Placement, SUNY Agricultural and Technical College, Cobleskill, New York 12043

"Starting Salary Offers to Graduates of Two-Year Colleges, 1975-76," 2 pp., free

NATIONAL ACADEMY OF SCIENCES/NATIONAL RESEARCH COUNCIL, 2101 Constitution Avenue, N.W., Washington, D. C. 20418

Doctoral Scientists and Engineers in the United States - 1975 Profile, 1976, 51 pp.

NATIONAL SCIENCE FOUNDATION. Available from the Government Printing Office, Washington, D. C. 20402

Characteristics of Doctoral Scientists and Engineers in the United States, 1975, NSF 77-309, 144 pp., $3.00

Characteristics of the National Sample of Scientists and Engineers 1974, Part 2, Employment, NSF 76-323, 214 pp., $2.80

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS, 2029 K Street, N.W., Washington, D. C. 20006

Professional Engineers' Income and Salary Survey 1975, Pub. No. 0004, June 1975, 72 pp., $10.00 to members, $20.00, non-members

U. S. CIVIL SERVICE COMMISSION, 1900 E Street, N.W., Washington, D. C. 20415

General Pay Classification Schedule, October 1, 1976 and October 1, 1977, free

Unpublished Data, October 31, 1976

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, NATIONAL CENTER FOR EDUCATION STATISTICS. Available from the Government Printing Office, Washington, D. C. 20402

Digest of Education Statistics, 1976 Edition, NCES 77-401, 214 pp., no price given

Higher Education - Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1975-76, NCES 77-318, 157 pp., $2.40

Unpublished Preliminary Data

U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, PUBLIC HEALTH SERVICE, Center for Disease Control, Bureau of Laboratories, Atlanta, Georgia 30333

Position Classification and Pay in State and Territorial Public Health Laboratories, Fiscal Year 1975, Number 8, 39 pp., free

U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS. Available from the Government Printing Office, Washington, D. C. 20402

National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1976, Bulletin 1931, 69 pp., $1.35

Occupational Outlook Handbook, 1976-77 Edition, Bulletin 1875, 775 pp., $7.00

News Release Dated July 11, 1977