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ABSTRACT

The data contained in this volume are the product of the National Science Foundations Scientific and Technical Personnel Data System. They represent estimates of demographic, employment, and educational characteristics of scientists and engineers in 1982. These data come from three different sources: (1) The Postcensal Survey of Scientists and Engineers; (2) The New Entrants Survey; and (3) The Survey of Doctoral Scientists and Engineers. Section A contains definitions and statistical procedures for the surveys. Section B contains the results of these surveys in the form of statistical tables. Section C contains data from the 1982 national survey of natural and social scientists and engineers, the 1981 survey of doctoral recipients, and the 1982 survey of science and engineering graduates. (CW)

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u. s. scientists and engineers: 1982

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surveys of science resources series
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volume 2
detailed statistical tables

NSF 85-307

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general notes

The data contained in this volume are a product of the National Science Foundation's (NSF's) Scientific and Technical Personnel Data System (STPDS). They represent estimates of the demographic, employment, and educational characteristics of scientists and engineers in 1982. The STPDS is a composite of three surveys, each designed to measure the characteristics of a particular population:

- The Postcensal Survey of Scientists and Engineers provides information obtained from almost 95,000 scientists and engineers in 1982. Individuals with scientific, engineering, or related occupations in the 1980 Census of Population constituted the major list from which the Postcensal Survey sample was drawn. Also surveyed were individuals with four or more years of college who were not in a scientific, engineering, or related occupation. The survey was conducted by the Bureau of the Census for NSF.
- The New Entrants Survey is designed to measure the number and characteristics of those who earned degrees in science and engineering after the 1980 decennial census was completed. Samples of the graduating classes of 1980 and 1981 were surveyed for NSF by the Institute for Survey Research, Temple University, Philadelphia, Pennsylvania.
- The Survey of Doctoral Scientists and Engineers consists of questionnaire responses from a sample of 60,000 scientists and engineers receiving degrees within the years 1938-80. The sample is drawn from a comprehensive roster of Doctoral Scientists and Engineers maintained by the Office of Scientific and Engineering Personnel, National Research Council, National Academy of Sciences. The Survey is conducted by the National Academy of Sciences for NSF.

The method by which these estimates were created differs from that used for past estimates. Mathematica Policy Research, Inc. (MPR), generated the estimates for NSF, utilizing a computer-based model. This model assists NSF by (1) providing additional flexibility in the types of cross tabulations that can be

produced, and (2) producing estimates on an annual basis, and for years for which survey data are not available.

Data in this publication (and in volume 1) are the first to incorporate findings of the 1982 Postcensal Survey of Natural and Social Scientists and Engineers. Each decade NSF develops a baseline of data on scientists and engineers by using the Postcensal survey. Since there are some differences in the data concepts and definitions used in each Decennial Census, the data presented for 1982 are not comparable with earlier estimates developed by NSF. Revised historical data for scientists and engineers will be available in the near future.

This report is the second of two volumes of 1982 national estimates of characteristics of U.S. scientists and engineers. The first volume contains data on employment characteristics as well as on selected demographic characteristics such as gender, race, and Hispanic status. This volume contains demographic and employment data, such as citizenship, reason for employment in non-S/E jobs, annual salaries, and Federal support status.

Since the Division of Science Resources Studies (SRS) has just finished reconstituting the STPDS, publications detailing methods and definitions for the national estimates of scientists and engineers used in this report are not yet available. For additional information, please contact the following SRS representative:

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technical notes

definition of scientists and engineers

The tables and figures in this report represent the population of scientists and engineers in the United States. Broadly speaking, a person is considered a scientist or engineer if at least two of the following criteria are met:

- Highest degree is in science (including social science) or engineering;
- Employment in a science or engineering (S/E) occupation;
- Self-identification is as a scientist or engineer on the basis of total education and work experience.

definitions of primary characteristics

field of science or engineering

Data on field of science or engineering are classified as follows:

- Physical sciences—chemistry, physics, astronomy, and other physical sciences including metallurgy
- Mathematical sciences—mathematics and statistics
- Environmental sciences—earth, atmospheric, and oceanographic sciences, including geophysics, geology, seismology, and meteorology
- Life sciences—agricultural, biological, and medical sciences (excluding those primarily engaged in patient care)
- Social sciences—economics, including agricultural economics, sociology, anthropology, and all other social sciences
- Psychology
- Compute. specialties
- Engineering

Data on field of employment are derived from responses to questions that request the name of the specialty most closely related to the respondent's principal employment. The specialty is chosen by the respondents from a list provided in the questionnaire. Doctorate-holders who selected an employment specialty not in science or engineering are assigned to a field of science or engineering based on the field of their degree. For those with less than a doctorate, their professional self-identification is used.

primary work activity

Data presented on the work activities of scientists and engineers represent their *primary* work activities. The data are derived from responses to a series of questions that ask respondents (1) to specify their primary work activity, and (2) to provide a percentage distribution of their work time among 10 to 15 listed activities.

other variables

For information on the various survey instruments used in the report, see the survey questionnaires in section C.

sampling and weighting procedures

The figures in this report are weighted to represent the population of scientists and engineers in the United States. The New Entrants Survey is based on a cluster sample of universities and colleges, so that the weights are reciprocal of the sampling probabilities.

The Roster of Doctorates is a comprehensive list of the population of such people. The Survey of Doctorates utilized a simple random sample, so that the weights are again the reciprocal of the sampling ratio.

The Postcensal Survey was more complex, involving the following major steps:

- The "universe" was the "long forms" from the 1980 Census of Population. The sample was drawn randomly within geographic strata. Housing units (and persons in group quarters) unless located in places with precensus populations below 2,500 persons in which case their chance of selection was 1-in-2. When the sampling rates are taken into account, approximately 19 percent of the housing units were included in the long-form sample.
- The following types of persons were screened out of the long-form sample:
 - (a) Those not currently in the labor force *and* who had never worked, or who had last worked before 1975;
 - (b) Those who had a nonengineering occupation *and* less than 4 years college;
 - (c) Those who had an engineering occupation *and* less than 2 years college;
 - (d) Those who were institutionalized; *and*,
 - (e) Those who were under 16 years of age.
- The remaining persons were categorized into strata and substrata. Strata were defined by 3-digit current occupation codes as recorded in the 1980 Census. Substrata were defined by race and sex.
- The stratified sample was then sampled, using a systematic random selection procedure within each stratum/substratum. Overall, there was about a 1-in-38 chance of selection at this stage.
- Questionnaires were mailed to 138,000 persons in 1982.
- Over 97,000 persons completed questionnaires and were further stratified by "in-scope" and "out-of-scope" following NSF definitions, available on request to NSF. In-scope is defined to be a scientist or engineer in 1982.
- The weight of each record with a completed questionnaire that was in-scope was multiplied by a "nonresponse adjustment factor."
- The weight of each in-scope record with a completed questionnaire was also multiplied by a "ratio estimation factor," designed to force the distribution of race and sex in the sample to be the same as among the original sample of scientists and engineers in the 1980 Census.

reliability of scientist and engineer estimates

Since the data on scientists and engineers are derived from sample surveys, the estimates are subject to both sampling and nonsampling errors.

The magnitude of the sampling errors are indicated by the various surveys contained in the following pages and listed below.

| Survey | Table |
|-------------------------------------------------------------|-------|
| Composite estimates of total scientists and engineers | 1 |
| Doctoral scientists and engineers | 2 |
| Recent S/E graduates | 3,4 |

The standard error may be used to construct a confidence interval about a given estimate. When the reported standard error is added to or subtracted from an estimate, the resulting range of values reflects an interval within which about 68 percent of all sample estimates surveyed under the same conditions will fall. Intervals reflecting a higher confidence level may be constructed by increasing the number of standard errors around a given estimate. For example, ± 2 standard errors defines a 95-percent confidence interval.

calculation of approximate standard errors of the complete tables

For the Postcensal Survey data, approximate standard errors are computed for selected "size of estimate values." The formula used for this purpose is on page 27 of the March 1983 Technical Documentation provided by Census for the 1980 public-use microdata samples (Census of Population and Housing 1980: Public-Use Microdata Samples Technical Documentation/prepared by the Data User Services Division, Bureau of the Census, Washington, D.C., 1983). The unadjusted standard errors of an estimated characteristic total are thus calculated on the assumption that the data for each field arose from a simple random sampling design (i.e., ignoring any gains in precision attributable to the stratified design actually used). For an estimate \hat{y} of a characteristic total in an S/E field, the standard error of the estimate \hat{y} is:

$$s.e.(\hat{y}) = \text{SQRT}[(1/f) * Y * (1 - \hat{y}/N)],$$

where N is the 1982 size of the S/E field (treated as a known quantity from the 1980 Census but actually updated by the 1982 survey data); f is the sampling rate for the field (relative to the "known" size of the field); and Y is the (weighted) estimate of a characteristic for persons within the specified field.

For the New Entrants Survey data, approximate standard errors were calculated by the Institute for Survey Research of Temple University for the same eight fields for \hat{y} ("size of estimate") values ranging upward from 100 to 10,000 or more, but not exceeding the size of the new entrant group for the field in question.

Assuming that it is proper to pool the estimate from the Postcensal Survey (for purposes of approximating the standard error of an estimate total of a characteristics within a field), we may calculate a result standard error as:

$$s.e.(\hat{y}) = \text{SQRT}[(n_1 - 1) * Se_1^2(\hat{y}) + (n_2 - 1) * Se_2^2(\hat{y}) / (n_1 + n_2 - 2)]$$

where n_1 is the obtained in-scope size from the Postcensal Survey and n_2 is the obtained in-scope sample size from the New Entrants survey; $s.e._1(\hat{y})$ and $s.e._2(\hat{y})$ are the corresponding approximate standard errors obtained separately for the two surveys for a characteristic total.

Table 1. Standard errors for estimates of total scientists and engineers

| Size of estimate | Total all fields | Physical scientists | Mathematical scientists | Computer specialists | Environmental scientists | Engineers | Life scientists | Psychologists | Social scientists |
|------------------|------------------|---------------------|-------------------------|----------------------|--------------------------|-----------|-----------------|---------------|-------------------|
| 100 | 75 | 80 | 60 | 80 | 60 | 70 | 80 | 90 | 80 |
| 200 | 100 | 120 | 90 | 120 | 80 | 100 | 120 | 130 | 120 |
| 500 | 170 | 190 | 150 | 200 | 130 | 160 | 180 | 200 | 190 |
| 700 | 200 | 230 | 170 | 230 | 160 | 190 | 220 | 240 | 220 |
| 1,000 | 240 | 270 | 210 | 280 | 190 | 230 | 260 | 280 | 260 |
| 2,500 | 380 | 430 | 320 | 430 | 290 | 360 | 400 | 450 | 420 |
| 5,000 | 540 | 610 | 450 | 620 | 410 | 510 | 570 | 630 | 590 |
| 10,000 | 770 | 850 | 600 | 870 | 570 | 720 | 880 | 880 | 810 |
| 25,000 | 1,200 | 1,300 | 740 | 1,300 | 810 | 1,100 | 1,200 | 1,300 | 1,200 |
| 50,000 | 1,700 | 1,700 | | 1,800 | 920 | 1,600 | 1,700 | 1,600 | 1,700 |
| 75,000 | 2,100 | 2,000 | | 2,200 | 740 | 1,900 | 2,000 | 1,800 | 2,000 |
| 80,000 | 2,200 | 2,000 | | 2,200 | 650 | 2,000 | 2,100 | 1,700 | 2,000 |
| 100,000 | 2,400 | 2,100 | | 2,400 | | 2,200 | 2,200 | 1,400 | 2,100 |
| 125,000 | 2,700 | 2,200 | | 2,600 | | 2,500 | 2,300 | | 2,200 |
| 150,000 | 2,900 | 2,100 | | 2,700 | | 2,700 | 2,400 | | 2,200 |
| 175,000 | 3,100 | 1,900 | | 2,700 | | 2,900 | 2,500 | | 2,200 |
| 200,000 | 3,300 | 1,700 | | 2,800 | | 3,000 | 2,500 | | 2,000 |
| 225,000 | 3,500 | 1,200 | | 2,700 | | 3,200 | 2,500 | | 1,800 |
| 250,000 | 3,700 | | | | | 3,400 | 3,400 | | 1,400 |
| 275,000 | 3,900 | | | | | 3,500 | 2,200 | | |
| 300,000 | 4,000 | | | | | 3,600 | 2,000 | | |
| 400,000 | 4,600 | | | | | 4,100 | | | |
| 500,000 | 5,000 | | | | | 4,400 | | | |
| 600,000 | 5,400 | | | | | 4,600 | | | |
| 700,000 | 5,800 | | | | | 4,800 | | | |
| 800,000 | 6,100 | | | | | 5,000 | | | |
| 900,000 | 6,300 | | | | | 5,100 | | | |
| 1,000,000 | 6,500 | | | | | 5,000 | | | |
| 1,200,000 | 6,900 | | | | | 5,000 | | | |
| 1,300,000 | 7,000 | | | | | 4,800 | | | |
| 1,500,000 | 7,200 | | | | | 4,400 | | | |
| 2,000,000 | 7,200 | | | | | | | | |
| 2,500,000 | 6,700 | | | | | | | | |
| 3,000,000 | 5,400 | | | | | | | | |
| 3,500,000 | 2,300 | | | | | | | | |

Source: Mathematica Policy Research, Inc.

Table 2. Standard errors for doctoral scientists and engineers

| Total population | | | | | | | | |
|------------------|--------------------------|-----------------|-------------------|------|------|-------|-------|------|
| Size of estimate | Estimated sampling error | Base of percent | Estimated percent | | | | | |
| | | | 1/99 | 2/98 | 5/95 | 10/90 | 25/75 | 50 |
| 100 | 35 | 500 | 1.55 | 2.19 | 3.40 | 4.69 | 6.76 | 7.81 |
| 200 | 49 | 1,000 | 1.10 | 1.55 | 2.41 | 3.31 | 4.78 | 5.52 |
| 500 | 78 | 2,000 | .78 | 1.09 | 1.70 | 2.34 | 3.38 | 3.90 |
| 1,000 | 110 | 5,000 | .49 | .69 | 1.08 | 1.48 | 2.14 | 2.49 |
| 2,000 | 156 | 10,000 | .35 | .49 | .76 | 1.05 | 1.51 | 1.75 |
| 5,000 | 245 | 15,000 | .28 | .40 | .62 | .86 | 1.23 | 1.43 |
| 10,000 | 344 | 20,000 | .25 | .35 | .54 | .74 | 1.07 | 1.23 |
| 15,000 | 419 | 30,000 | .20 | .28 | .44 | .60 | .87 | 1.01 |
| 20,000 | 480 | 40,000 | .17 | .24 | .38 | .52 | .76 | .87 |
| 30,000 | 579 | 50,000 | .16 | .22 | .34 | .47 | .68 | .78 |
| 40,000 | 658 | 75,000 | .13 | .18 | .28 | .38 | .55 | .64 |
| 50,000 | 725 | 100,000 | .11 | .15 | .24 | .33 | .48 | .55 |
| 75,000 | 852 | 150,000 | .09 | .13 | .20 | .27 | .39 | .45 |
| 100,000 | 940 | 200,000 | .08 | .11 | .17 | .23 | .34 | .39 |
| 150,000 | 1,037 | 250,000 | .07 | .10 | .15 | .21 | .30 | .35 |
| 200,000 | 1,048 | 275,000 | .07 | .09 | .15 | .20 | .29 | .33 |
| 250,000 | 977 | 300,000 | .06 | .09 | .14 | .19 | .28 | .32 |
| 300,000 | 801 | 325,000 | .06 | .09 | .13 | .18 | .27 | .31 |

| Employed women | | | | | | | | |
|------------------|--------------------------|-----------------|-------------------|------|------|-------|-------|------|
| Size of estimate | Estimated sampling error | Base of percent | Estimated percent | | | | | |
| | | | 1/99 | 2/98 | 5/95 | 10/90 | 25/75 | 50 |
| 100 | 20 | 500 | .96 | 1.36 | 2.11 | 2.91 | 4.19 | 4.84 |
| 200 | 29 | 1,000 | .68 | .96 | 1.49 | 2.05 | 3.97 | 3.42 |
| 500 | 45 | 2,000 | .48 | .68 | 1.06 | 1.45 | 2.10 | 2.42 |
| 1,000 | 64 | 5,000 | .30 | .43 | .67 | .92 | 1.33 | 1.53 |
| 2,000 | 89 | 10,000 | .22 | .30 | .47 | .65 | .94 | 1.08 |
| 5,000 | 135 | 15,000 | .18 | .25 | .39 | .53 | .77 | .88 |
| 10,000 | 177 | 20,000 | .15 | .21 | .33 | .46 | .66 | .77 |
| 15,000 | 199 | 25,000 | .14 | .19 | .30 | .41 | .59 | .68 |
| 20,000 | 206 | 30,000 | .12 | .18 | .27 | .38 | .54 | .63 |
| 30,000 | 183 | | | | | | | |

| Employed by field | | | | | | | | | | | | | | |
|--------------------------------|------------------|-----|-----|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Field | Size of estimate | | | | | | | | | | | | | |
| | 100 | 200 | 500 | 1,000 | 2,000 | 5,000 | 10,000 | 15,000 | 20,000 | 30,000 | 40,000 | 50,000 | 60,000 | 70,000 |
| Physical scientists ... | 35 | 55 | 85 | 115 | 165 | 255 | 340 | 400 | 435 | 470 | 450 | 380 | | |
| Mathematical scientists | 30 | 40 | 65 | 90 | 125 | 175 | 180 | | | | | | | |
| Computer specialists | 30 | 45 | 70 | 95 | 125 | 150 | | | | | | | | |
| Environmental scientists | 30 | 40 | 65 | 90 | 125 | 175 | 185 | | | | | | | |
| Engineers | 50 | 65 | 105 | 150 | 210 | 320 | 430 | 500 | 540 | 565 | 520 | 370 | | |
| Life scientists | 30 | 40 | 65 | 95 | 130 | 205 | 280 | 335 | 370 | 420 | 440 | 435 | 405 | 350 |
| Psychologists | 35 | 50 | 80 | 115 | 160 | 240 | 315 | 360 | 375 | 345 | | | | |
| Social scientists | 40 | 60 | 90 | 130 | 180 | 280 | 375 | 430 | 465 | 475 | 410 | | | |

Source: National Science Foundation.

Table 3. Generalized standard errors for science/engineering bachelor's-degree recipients

| Size of estimate | Total all fields | Physical scientists | Mathematical scientists | Computer specialists | Environmental scientists | Engineers | Life scientists | Psychologists | Social scientists |
|------------------|------------------|---------------------|-------------------------|----------------------|--------------------------|-----------|-----------------|---------------|-------------------|
| 100 | 160 | 90 | 95 | 80 | 85 | 100 | 140 | 130 | 190 |
| 200 | 230 | 130 | 130 | 120 | 120 | 140 | 190 | 180 | 270 |
| 300 | 280 | 160 | 160 | 140 | 150 | 170 | 230 | 230 | 330 |
| 400 | 320 | 180 | 190 | 160 | 170 | 200 | 270 | 260 | 380 |
| 500 | 360 | 200 | 210 | 180 | 190 | 220 | 300 | 290 | 430 |
| 750 | 440 | 250 | 260 | 220 | 230 | 270 | 370 | 360 | 520 |
| 1,000 | 510 | 280 | 290 | 250 | 260 | 310 | 430 | 410 | 600 |
| 2,000 | 720 | 390 | 400 | 350 | 350 | 440 | 600 | 570 | 840 |
| 3,000 | 890 | 460 | 480 | 420 | 400 | 540 | 730 | 700 | 1,050 |
| 4,000 | 1,000 | 510 | 540 | 470 | 430 | 620 | 840 | 800 | 1,200 |
| 5,000 | 1,150 | 550 | 580 | 520 | 430 | 690 | 930 | 880 | 1,300 |
| 6,000 | 1,250 | 580 | 620 | 550 | 420 | 750 | 1,000 | 960 | 1,450 |
| 7,000 | 1,350 | 600 | 650 | 580 | 390 | 810 | 1,100 | 1,000 | 1,550 |
| 8,000 | 1,450 | 600 | 670 | 600 | 340 | 860 | 1,150 | 1,100 | 1,650 |
| 9,000 | 1,500 | 620 | 680 | 620 | 240 | 910 | 1,200 | 1,150 | 1,750 |
| 10,000 | 1,600 | 620 | 680 | | | 950 | 1,250 | 1,200 | 1,800 |
| 15,000 | 1,950 | 480 | 610 | | | 1,150 | 1,500 | 1,350 | 2,200 |
| 20,000 | 2,250 | | | | | 1,300 | 1,650 | 1,500 | 2,450 |
| 30,000 | 2,700 | | | | | 1,500 | 1,850 | 1,550 | 2,850 |
| 40,000 | 3,100 | | | | | 1,600 | 1,950 | 1,400 | 4,000 |
| 50,000 | 3,400 | | | | | 1,700 | 1,900 | 1,700 | 3,250 |
| 60,000 | 3,700 | | | | | 1,700 | 1,700 | | 3,250 |
| 70,000 | 3,950 | | | | | 1,650 | 1,350 | | 3,200 |
| 80,000 | 4,150 | | | | | 1,550 | | | 3,050 |
| 90,000 | 4,350 | | | | | 1,400 | | | 2,800 |
| 100,000 | 4,500 | | | | | 1,150 | | | 2,350 |
| 200,000 | 5,400 | | | | | | | | |
| 300,000 | 5,050 | | | | | | | | |
| 400,000 | 3,250 | | | | | | | | |

Sources: Institute for Survey Research, Temple University and National Science Foundation.

Table 4. Generalized standard errors for science/engineering master's-degree recipients

| Size of estimate | Total all fields | Physical scientists | Mathematical scientists | Computer specialists | Environmental scientists | Engineers | Life scientists | Psychologists | Social scientists |
|------------------|------------------|---------------------|-------------------------|----------------------|--------------------------|-----------|-----------------|---------------|-------------------|
| 100 | 90 | 60 | 90 | 75 | 40 | 65 | 75 | 95 | 110 |
| 200 | 130 | 80 | 130 | 100 | 55 | 95 | 110 | 130 | 150 |
| 300 | 150 | 100 | 150 | 130 | 65 | 110 | 130 | 160 | 190 |
| 400 | 180 | 110 | 180 | 150 | 75 | 130 | 150 | 170 | 210 |
| 500 | 200 | 120 | 190 | 160 | 80 | 150 | 170 | 210 | 240 |
| 750 | 240 | 150 | 230 | 190 | 90 | 180 | 200 | 250 | 290 |
| 1,000 | 280 | 160 | 260 | 220 | 100 | 200 | 230 | 280 | 330 |
| 1,500 | 340 | 180 | 300 | 260 | 100 | 250 | 280 | 320 | 390 |
| 2,000 | 390 | 190 | 330 | 290 | 80 | 280 | 310 | 350 | 440 |
| 3,000 | 480 | 160 | 350 | 320 | | 340 | 370 | 370 | 510 |
| 4,000 | 550 | | 320 | 330 | | 380 | 400 | 340 | 550 |
| 5,000 | 610 | | | 320 | | 410 | 410 | 250 | 570 |
| 6,000 | 660 | | | 280 | | 440 | 420 | | 570 |
| 7,000 | 710 | | | | | 460 | 410 | | 550 |
| 8,000 | 750 | | | | | 470 | 390 | | 510 |
| 9,000 | 790 | | | | | 480 | 360 | | 440 |
| 10,000 | 820 | | | | | 490 | 300 | | |
| 15,000 | 970 | | | | | 460 | | | |
| 20,000 | 1,050 | | | | | 300 | | | |
| 30,000 | 1,150 | | | | | | | | |
| 40,000 | 1,200 | | | | | | | | |
| 50,000 | 1,100 | | | | | | | | |
| 60,000 | 860 | | | | | | | | |

Sources: Institute for Survey Research, Temple University and National Science Foundation.

section b

statistical tables

scientists and engineers, 1982

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Table B-1. Scientists and engineers by field, citizenship and sex/race/ethnic group: 1982

| Field and citizenship | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|--------------------------|---------|---------|--------|---------|-------|--------|-----------------|-------|----------|
| Total, all fields | 3506000 | 3068800 | 437200 | 3224800 | 76900 | 144500 | 16400 | 43400 | 75200 |
| U.S. | 3296800 | 2878900 | 418000 | 3075400 | 71600 | 98000 | 16000 | 35800 | 64300 |
| Non-U.S. | 108300 | 93800 | 14500 | 55500 | 3000 | 42700 | 100 | 7000 | 9100 |
| No report | 100800 | 96100 | 4700 | 93900 | 2200 | 3800 | 200 | 700 | 1800 |
| Total scientists | 1519300 | 1147200 | 372100 | 1396600 | 43200 | 52700 | 6900 | 19900 | 31200 |
| U.S. | 1457800 | 1099900 | 358000 | 1359300 | 41400 | 33700 | 6800 | 16500 | 27500 |
| Non-U.S. | 46600 | 35200 | 11400 | 24000 | 1200 | 18300 | 100 | 3100 | 3300 |
| No report | 14800 | 12100 | 2700 | 13300 | 500 | 700 | (1) | 300 | 400 |
| Physical scientists | 249400 | 223100 | 26400 | 232400 | 4100 | 9300 | 800 | 2800 | 4400 |
| U.S. | 236800 | 212100 | 24700 | 224200 | 3800 | 5600 | 800 | 2400 | 3700 |
| Non-U.S. | 9700 | 8200 | 1400 | 5300 | 300 | 3700 | (1) | 400 | 600 |
| No report | 3000 | 2800 | 200 | 2900 | (1) | (1) | (1) | (1) | 200 |
| Mathematical scientists | 86300 | 57900 | 28300 | 78500 | 3800 | 3100 | 100 | 700 | 1600 |
| U.S. | 82300 | 55300 | 27100 | 75800 | 3600 | 2300 | 100 | 400 | 1300 |
| Non-U.S. | 3300 | 2100 | 1100 | 2200 | (1) | 800 | (1) | 300 | 300 |
| No report | 700 | 500 | 200 | 500 | 200 | (1) | (1) | (1) | (1) |
| Computer specialists | 309100 | 224900 | 84300 | 281500 | 9200 | 13500 | 1100 | 3900 | 4700 |
| U.S. | 297000 | 215800 | 81300 | 275100 | 8900 | 8900 | 1100 | 3100 | 4000 |
| Non-U.S. | 8900 | 6700 | 2300 | 3700 | 100 | 4300 | (1) | 800 | 600 |
| No report | 3200 | 2400 | 700 | 2600 | 200 | 300 | (1) | (1) | 100 |
| Environmental scientists | 95300 | 81100 | 14200 | 88400 | 600 | 3800 | 900 | 1500 | 1500 |
| U.S. | 91700 | 77900 | 13800 | 86300 | 600 | 2600 | 900 | 1400 | 1400 |
| Non-U.S. | 2300 | 2100 | 200 | 1000 | (1) | 1200 | (1) | 100 | 100 |
| No report | 1200 | 1100 | 200 | 1200 | (1) | 100 | (1) | (1) | (1) |
| Life scientists | 365500 | 286900 | 78600 | 343600 | 8500 | 8500 | 1500 | 3300 | 7500 |
| U.S. | 353400 | 277800 | 75600 | 335200 | 8000 | 5900 | 1400 | 2800 | 6400 |
| Non-U.S. | 9800 | 7400 | 2400 | 6300 | 400 | 2500 | (1) | 500 | 1000 |
| No report | 2300 | 1700 | 600 | 2100 | 100 | 100 | (1) | (1) | 100 |

See footnotes at end of table.

Table B-1. Scientists and engineers by field, citizenship and sex/race/ethnic group: 1982-Continued

| Field and citizenship | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|----------------------------|---------|---------|--------|---------|-------|-------|-----------------|-------|----------|
| Psychologists | 149400 | 88300 | 61100 | 140400 | 5000 | 1500 | 1100 | 1500 | 2500 |
| U.S. | 146600 | 86600 | 60000 | 138100 | 4900 | 1200 | 1100 | 1300 | 2400 |
| Non-U.S. | 1300 | 500 | 800 | 800 | (1) | 300 | (1) | 100 | 100 |
| No report | 1600 | 1300 | 300 | 1500 | (1) | (1) | (1) | (1) | (1) |
| Social scientists | 264300 | 185000 | 79300 | 231800 | 12000 | 12900 | 1500 | 6200 | 9100 |
| U.S. | 250000 | 174500 | 75500 | 224500 | 11700 | 7200 | 1500 | 5100 | 8300 |
| Non-U.S. | 11400 | 8200 | 3200 | 4800 | 300 | 5500 | (1) | 900 | 700 |
| No report | 2900 | 2300 | 600 | 2500 | (1) | 200 | (1) | 200 | (1) |
| Total engineers | 1986700 | 1921600 | 65100 | 1828200 | 33700 | 91800 | 9500 | 23600 | 44000 |
| U.S. | 1839000 | 1779000 | 60000 | 1716100 | 30200 | 64300 | 9200 | 19200 | 36800 |
| Non-U.S. | 61700 | 58600 | 3100 | 31500 | 1800 | 24400 | 100 | 3900 | 5800 |
| No report | 86000 | 84000 | 2000 | 80500 | 1700 | 3100 | 200 | 400 | 1500 |
| Aeronautical/astronautical | 87100 | 84800 | 2200 | 82100 | 1200 | 2800 | 200 | 900 | 1600 |
| U.S. | 81000 | 78800 | 2200 | 76600 | 1200 | 2300 | 200 | 800 | 1500 |
| Non-U.S. | 2700 | 2600 | (1) | 2200 | (1) | 400 | (1) | 100 | (1) |
| No report | 3400 | 3400 | (1) | 3300 | (1) | 100 | (1) | (1) | (1) |
| Chemical | 119500 | 112000 | 7500 | 108200 | 1300 | 8000 | 200 | 1800 | 3200 |
| U.S. | 110400 | 103600 | 6800 | 102600 | 1100 | 5200 | 200 | 1200 | 2400 |
| Non-U.S. | 5800 | 5200 | 600 | 2600 | 100 | 2600 | (1) | 500 | 800 |
| No report | 3300 | 3200 | 100 | 3100 | (1) | 200 | (1) | (1) | (1) |
| Civil | 277600 | 270600 | 6900 | 248900 | 3900 | 18700 | 1100 | 4900 | 8500 |
| U.S. | 258700 | 252500 | 6200 | 235800 | 3400 | 14300 | 1000 | 4100 | 7400 |
| Non-U.S. | 8600 | 8100 | 500 | 3500 | 400 | 3900 | (1) | 700 | 900 |
| No report | 10300 | 10100 | 200 | 9600 | 100 | 500 | (1) | 100 | 200 |
| Electrical/electronics | 462200 | 452000 | 10200 | 419800 | 10500 | 24800 | 2300 | 4900 | 9400 |
| U.S. | 427600 | 418600 | 9000 | 395000 | 9200 | 17200 | 2300 | 3900 | 8100 |
| Non-U.S. | 14500 | 13800 | 700 | 6200 | 700 | 6800 | (1) | 900 | 1000 |
| No report | 20000 | 19600 | 400 | 18600 | 600 | 800 | (1) | 100 | 300 |

See footnotes at end of table.

Table B-1. Scientists and engineers by field, citizenship and sex/race/ethnic group: 1982-Continued

| Field and citizenship | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|-----------------------|--------|--------|--------|--------|-------|-------|-----------------|-------|----------|
| Industrial | 123100 | 117900 | 5200 | 116200 | 2400 | 3100 | 400 | 1000 | 2900 |
| U.S. | 113500 | 108600 | 4900 | 108200 | 2200 | 2000 | 400 | 700 | 1900 |
| Non-U.S. | 3100 | 3000 | 100 | 1700 | (1) | 1000 | (1) | 300 | 600 |
| No report | 6500 | 6400 | 200 | 6200 | 100 | 100 | (1) | (1) | 300 |
| Materials | 43000 | 40900 | 2100 | 39500 | 400 | 2600 | 200 | 300 | 400 |
| U.S. | 39600 | 37600 | 2000 | 37500 | 400 | 1300 | 200 | 200 | 400 |
| Non-U.S. | 2100 | 2000 | 100 | 900 | (1) | 1100 | (1) | (1) | (1) |
| No report | 1300 | 1300 | (1) | 1100 | (1) | 200 | (1) | (1) | (1) |
| Mechanical | 388700 | 380900 | 7900 | 361900 | 4000 | 16700 | 2000 | 4200 | 7200 |
| U.S. | 361800 | 354600 | 7300 | 341400 | 3700 | 11500 | 1900 | 3400 | 6000 |
| Non-U.S. | 13200 | 12800 | 500 | 7600 | 100 | 4800 | (1) | 700 | 1000 |
| No report | 13700 | 13500 | 100 | 12900 | 200 | 400 | 100 | 100 | 200 |
| Mining | 15800 | 15100 | 600 | 15000 | (1) | 200 | 400 | 100 | 100 |
| U.S. | 15200 | 14500 | 600 | 14500 | (1) | 100 | 400 | (1) | 100 |
| Non-U.S. | 400 | 400 | (1) | 300 | (1) | 100 | (1) | (1) | (1) |
| No report | 200 | 200 | (1) | 200 | (1) | (1) | (1) | (1) | (1) |
| Nuclear | 19200 | 18700 | 500 | 17600 | 100 | 1200 | (1) | 200 | 200 |
| U.S. | 17700 | 17300 | 500 | 16600 | 100 | 900 | (1) | 200 | 200 |
| Non-U.S. | 500 | 500 | (1) | 200 | (1) | 300 | (1) | 100 | (1) |
| No report | 1000 | 1000 | (1) | 900 | (1) | (1) | (1) | (1) | (1) |
| Petroleum | 29100 | 27600 | 1500 | 27200 | 300 | 500 | 500 | 500 | 1000 |
| U.S. | 25900 | 24500 | 1400 | 24700 | 200 | 200 | 500 | 200 | 700 |
| Non-U.S. | 1300 | 1200 | (1) | 700 | (1) | 300 | (1) | 200 | 300 |
| No report | 1900 | 1900 | (1) | 1800 | (1) | (1) | (1) | (1) | (1) |
| Other engineers | 421500 | 401000 | 20600 | 391700 | 9600 | 13200 | 2100 | 4900 | 9500 |
| U.S. | 387600 | 368500 | 19100 | 363300 | 8600 | 9300 | 1900 | 4400 | 7900 |
| Non-U.S. | 9500 | 9000 | 600 | 5700 | 300 | 3100 | (1) | 400 | 1100 |
| No report | 24400 | 23500 | 900 | 22700 | 600 | 900 | 200 | 100 | 500 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.

SOURCE: National Science Foundation.

Table B-2. Scientists and engineers by field, sex and full/part-time employment status: 1982

| Field and sex | Total Employed | Full-time | Part-time | | | No report |
|--------------------------|----------------|-----------|-----------|-------------------|-----------------------|-----------|
| | | | Total | Seeking full-time | Not seeking full-time | |
| Total, all fields | 3253000 | 3107900 | 134300 | 24700 | 109600 | 10700 |
| Men | 2864000 | 2773700 | 84400 | 15400 | 69000 | 5900 |
| Women | 388900 | 334200 | 49900 | 9300 | 40600 | 4800 |
| Total scientists | 1405700 | 1301800 | 96900 | 18900 | 78000 | 7100 |
| Men | 1075100 | 1022900 | 49200 | 9800 | 39400 | 3000 |
| Women | 330600 | 278800 | 47600 | 9100 | 38600 | 4100 |
| Physical scientists | 227400 | 214800 | 11600 | 1800 | 9800 | 1000 |
| Men | 205100 | 195600 | 8800 | 1600 | 7200 | 700 |
| Women | 22300 | 19200 | 2800 | 200 | 2600 | 300 |
| Mathematical scientists | 79400 | 71800 | 6700 | 800 | 5800 | 900 |
| Men | 54000 | 50900 | 2700 | 400 | 2300 | 500 |
| Women | 25300 | 20900 | 4000 | 400 | 3600 | 500 |
| Computer specialists | 299000 | 290000 | 7900 | 600 | 7300 | 1100 |
| Men | 220300 | 217200 | 2800 | 500 | 2300 | 300 |
| Women | 78700 | 72800 | 5100 | 100 | 5000 | 800 |
| Environmental scientists | 87200 | 80900 | 6000 | 900 | 5100 | 300 |
| Men | 74800 | 70500 | 4200 | 600 | 3600 | 200 |
| Women | 12400 | 10400 | 1900 | 400 | 1500 | 100 |
| Life scientists | 337100 | 310600 | 25200 | 5100 | 20100 | 1300 |
| Men | 268500 | 253300 | 14700 | 2800 | 11800 | 500 |
| Women | 68600 | 57300 | 10500 | 2200 | 8200 | 900 |
| Psychologists | 138400 | 119000 | 18400 | 3400 | 15000 | 1000 |
| Men | 83000 | 77100 | 5600 | 800 | 4700 | 400 |
| Women | 55400 | 41900 | 12800 | 2500 | 10300 | 700 |
| Social scientists | 237200 | 214700 | 21100 | 6200 | 14900 | 1400 |
| Men | 169300 | 158300 | 10600 | 3100 | 7500 | 400 |
| Women | 67900 | 56400 | 10500 | 3200 | 7400 | 1000 |

See footnotes at end of table.

Table B-2. Scientists and engineers by field, sex and full/part-time employment status: 1982-Continued

| Field and sex | Total Employed | Full-time | Part-time | | | No report |
|-----------------------------------|----------------|----------------|--------------|-------------------|-----------------------|-------------|
| | | | Total | Seeking full-time | Not seeking full-time | |
| Total engineers | 1847200 | 1806200 | 37400 | 5800 | 31600 | 3600 |
| Men | 1788900 | 1750800 | 35200 | 5600 | 29600 | 2900 |
| Women | 58300 | 55400 | 2200 | 200 | 2000 | 700 |
| Aeronautical/astronautical | 80800 | 79300 | 1400 | 100 | 1300 | 100 |
| Men | 78700 | 77300 | 1300 | 100 | 1200 | 100 |
| Women | 2100 | 2000 | 100 | (1) | 100 | (1) |
| Chemical | 107700 | 104800 | 2800 | 300 | 2500 | 200 |
| Men | 101600 | 99100 | 2500 | 300 | 2300 | (1) |
| Women | 6100 | 5700 | 300 | (1) | 300 | 200 |
| Civil | 258200 | 250700 | 7200 | 1000 | 6100 | 400 |
| Men | 252200 | 244900 | 6900 | 1000 | 5900 | 300 |
| Women | 6100 | 5800 | 200 | (1) | 200 | (1) |
| Electrical/electronics | 437700 | 429400 | 7400 | 1100 | 6300 | 900 |
| Men | 428600 | 420700 | 7100 | 1000 | 6100 | 800 |
| Women | 9100 | 8700 | 300 | (1) | 200 | 100 |
| Industrial | 113100 | 111400 | 1500 | 700 | 800 | 200 |
| Men | 108600 | 107100 | 1300 | 700 | 600 | 200 |
| Women | 4500 | 4300 | 100 | (1) | 100 | (1) |
| Materials | 39200 | 37700 | 1500 | 300 | 1200 | (1) |
| Men | 37500 | 36000 | 1500 | 300 | 1200 | (1) |
| Women | 1700 | 1700 | (1) | (1) | (1) | (1) |
| Mechanical | 357900 | 351200 | 6000 | 900 | 5100 | 600 |
| Men | 350700 | 344800 | 5500 | 900 | 4600 | 500 |
| Women | 7100 | 6400 | 600 | (1) | 500 | 100 |
| Mining | 14200 | 13200 | 900 | 200 | 800 | 100 |
| Men | 13700 | 12700 | 900 | 200 | 800 | 100 |
| Women | 500 | 400 | (1) | (1) | (1) | (1) |

See footnotes at end of table.

Table B-2. Scientists and engineers by field, sex and full/part-time employment status: 1982-Continued

| Field and sex | Total Employed | Full-time | Part-time | | | No report |
|-----------------|----------------|-----------|-----------|-------------------|-----------------------|-----------|
| | | | Total | Seeking full-time | Not seeking full-time | |
| Nuclear | 18200 | 17800 | 400 | 100 | 300 | 100 |
| Men | 17900 | 17400 | 400 | 100 | 300 | 100 |
| Women | 400 | 400 | (1) | (1) | (1) | (1) |
| Petroleum | 27700 | 27100 | 500 | (1) | 500 | 100 |
| Men | 26300 | 25800 | 400 | (1) | 400 | 100 |
| Women | 1400 | 1300 | 100 | (1) | 100 | (1) |
| Other engineers | 392500 | 383500 | 7900 | 1200 | 6700 | 1000 |
| Men | 373200 | 365000 | 7400 | 1100 | 6300 | 800 |
| Women | 19300 | 18500 | 600 | 200 | 400 | 200 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

Table B-3. Scientists and engineers outside the labor force by field, sex and major reason not working or seeking work: 1982

| Field and sex | Total | Retired | Student | Family resp. | Illness | No jobs | Not want work | Other | No report |
|---------------------------------|--------|---------|---------|--------------|---------|---------|---------------|-------|-----------|
| Total, all fields | 178800 | 109600 | 37800 | 10500 | 6900 | 1500 | 5400 | 6400 | 600 |
| Men | 149000 | 106100 | 28500 | 300 | 6400 | 1200 | 1900 | 4100 | 500 |
| Women | 29800 | 3500 | 9300 | 10200 | 600 | 400 | 3500 | 2300 | 100 |
| Total scientists | 75100 | 29200 | 26500 | 8700 | 1900 | 1100 | 3800 | 3600 | 300 |
| Men | 49400 | 26100 | 18500 | 100 | 1400 | 800 | 600 | 1600 | 200 |
| Women | 25700 | 3100 | 8000 | 8600 | 500 | 300 | 3200 | 2100 | (1) |
| Physical scientists | 16300 | 8400 | 6100 | 600 | 700 | (1) | (1) | 300 | 100 |
| Men | 13400 | 7900 | 4700 | (1) | 600 | (1) | (1) | 100 | 100 |
| Women | 2900 | 500 | 1400 | 600 | 100 | (1) | (1) | 200 | (1) |
| Mathematical scientists | 5200 | 2400 | 1200 | 300 | 300 | (1) | 500 | 500 | (1) |
| Men | 3000 | 1600 | 700 | (1) | 200 | (1) | 200 | 100 | (1) |
| Women | 2200 | 800 | 500 | 300 | 100 | (1) | 200 | 300 | (1) |
| Computer specialists | 6900 | 900 | 1600 | 2600 | 300 | (1) | 1100 | 300 | (1) |
| Men | 2400 | 900 | 1000 | (1) | 300 | (1) | 200 | (1) | (1) |
| Women | 4500 | (1) | 700 | 2600 | (1) | (1) | 900 | 300 | (1) |
| Environmental scientists | 5500 | 2400 | 2400 | 300 | (1) | 100 | 100 | 200 | (1) |
| Men | 4400 | 2400 | 1700 | (1) | (1) | 100 | (1) | 100 | (1) |
| Women | 1200 | (1) | 700 | 300 | (1) | (1) | 100 | 100 | (1) |
| Life scientists | 20000 | 7600 | 8100 | 1900 | 100 | 200 | 900 | 1100 | (1) |
| Men | 13700 | 7300 | 5500 | 100 | 100 | 100 | 100 | 500 | (1) |
| Women | 6300 | 400 | 2500 | 1900 | (1) | 200 | 800 | 500 | (1) |
| Psychologists | 6500 | 1100 | 2400 | 900 | 300 | 400 | 900 | 300 | (1) |
| Men | 2900 | 800 | 1300 | (1) | 200 | 300 | (1) | 200 | (1) |
| Women | 3600 | 300 | 1200 | 900 | 100 | 100 | 900 | 100 | (1) |
| Social scientists | 14700 | 6300 | 4700 | 2000 | 200 | 300 | 300 | 1000 | (1) |
| Men | 9600 | 5200 | 3600 | (1) | 100 | 200 | (1) | 500 | (1) |
| Women | 5100 | 1100 | 1100 | 2000 | 100 | (1) | 300 | 400 | (1) |

See footnotes at end of table.

Table B-3. Scientists and engineers outside the labor force by field, sex and major reason not working or seeking work: 1982-Continued

| Field and sex | Total | Retired | Student | Family resp. | Illness | No jobs | Not want work | Other | No report |
|----------------------------|--------|---------|---------|--------------|---------|---------|---------------|-------|-----------|
| Total engineers | 103700 | 80400 | 11400 | 1800 | 5000 | 400 | 1600 | 2800 | 300 |
| Men | 99600 | 80000 | 10000 | 100 | 4900 | 400 | 1300 | 2600 | 300 |
| Women | 4100 | 400 | 1400 | 1600 | 100 | 100 | 300 | 200 | (1) |
| Aeronautical/astronautical | 4700 | 4000 | 400 | (1) | 200 | (1) | (1) | 200 | (1) |
| Men | 4700 | 4000 | 400 | (1) | 200 | (1) | (1) | 200 | (1) |
| Women | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Chemical | 8500 | 5100 | 2200 | 500 | 300 | 100 | 300 | 100 | 100 |
| Men | 7500 | 5100 | 1800 | (1) | 300 | 100 | 200 | 100 | 100 |
| Women | 1000 | (1) | 400 | 500 | (1) | (1) | 100 | (1) | (1) |
| Civil | 14200 | 11600 | 1300 | 200 | 300 | 100 | 200 | 400 | (1) |
| Men | 13700 | 11600 | 1200 | (1) | 300 | 100 | 200 | 300 | (1) |
| Women | 500 | (1) | 200 | 200 | (1) | (1) | (1) | 100 | (1) |
| Electrical/electronics | 19100 | 13700 | 2400 | 300 | 1500 | 200 | 300 | 700 | (1) |
| Men | 18500 | 13700 | 2200 | (1) | 1500 | 200 | 300 | 700 | (1) |
| Women | 600 | (1) | 200 | 300 | (1) | (1) | (1) | 100 | (1) |
| Industrial | 7200 | 5800 | 400 | (1) | 600 | (1) | 100 | 200 | 100 |
| Men | 6800 | 5700 | 300 | (1) | 600 | (1) | 100 | 100 | 100 |
| Women | 300 | (1) | 200 | (1) | (1) | (1) | (1) | 100 | (1) |
| Materials | 2800 | 2100 | 600 | (1) | (1) | (1) | (1) | 100 | (1) |
| Men | 2700 | 2100 | 500 | (1) | (1) | (1) | (1) | 100 | (1) |
| Women | 100 | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Mechanical | 23300 | 19600 | 1800 | 300 | 1100 | (1) | 200 | 200 | 100 |
| Men | 22900 | 19500 | 1700 | 100 | 1000 | (1) | 200 | 200 | 100 |
| Women | 400 | (1) | 200 | 100 | (1) | (1) | (1) | (1) | (1) |
| Mining | 1200 | 900 | (1) | (1) | 100 | (1) | (1) | 100 | (1) |
| Men | 1100 | 800 | (1) | (1) | 100 | (1) | (1) | 100 | (1) |
| Women | 100 | 100 | (1) | (1) | (1) | (1) | (1) | (1) | (1) |

See footnotes at end of table.

Table B-3. Scientists and engineers outside the labor force by field, sex and major reason not working or seeking work:
1982-Continued

| Field and sex | Total | Retired | Student | Family resp. | Illness | No jobs | Not want work | Other | No report |
|-----------------|-------|---------|---------|--------------|---------|---------|---------------|-------|-----------|
| Nuclear | 500 | 300 | 200 | (1) | (1) | (1) | (1) | (1) | (1) |
| Men | 400 | 300 | 200 | (1) | (1) | (1) | (1) | (1) | (1) |
| Women | 100 | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Petroleum | 1000 | 800 | 100 | (1) | (1) | (1) | 100 | 100 | (1) |
| Men | 1000 | 800 | 100 | (1) | (1) | (1) | 100 | 100 | (1) |
| Women | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other engineers | 21200 | 16600 | 1800 | 400 | 1000 | 100 | 400 | 800 | 100 |
| Men | 20300 | 16500 | 1700 | (1) | 1000 | 100 | 300 | 700 | (1) |
| Women | 900 | 100 | 200 | 400 | (1) | (1) | 100 | (1) | (1) |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

Table B-4. Scientists and engineers by field, sex and major reason for non-S/E employment: 1982

| Field and sex | Total employed in non-S/E | Preference | Promotion | Better pay | Location preference | Believe S/E not available | Other | No report |
|--------------------------|---------------------------|------------|-----------|------------|---------------------|---------------------------|-------|-----------|
| Total, all fields | 386400 | 100800 | 29100 | 39100 | 15400 | 39500 | 40100 | 122300 |
| Men | 311600 | 76500 | 27700 | 31500 | 11600 | 25200 | 32500 | 106600 |
| Women | 74800 | 24300 | 1400 | 7600 | 3800 | 14300 | 7700 | 15700 |
| Total scientists | 258200 | 84100 | 11100 | 31200 | 11600 | 34100 | 30600 | 55500 |
| Men | 187400 | 60800 | 10000 | 23800 | 8300 | 20300 | 23100 | 41000 |
| Women | 70800 | 23300 | 1100 | 7400 | 3300 | 13800 | 7500 | 14400 |
| Physical scientists | 16900 | 2900 | 2100 | 1700 | 300 | 1000 | 1200 | 7700 |
| Men | 15100 | 2700 | 1900 | 1500 | 200 | 900 | 1200 | 6800 |
| Women | 1700 | 200 | 200 | 100 | 100 | 100 | 100 | 900 |
| Mathematical scientists | 11100 | 3700 | 1600 | 700 | (1) | 800 | 2000 | 2300 |
| Men | 8500 | 2600 | 1500 | 500 | (1) | 600 | 1600 | 1700 |
| Women | 2600 | 1100 | 100 | 200 | (1) | 200 | 400 | 600 |
| Computer specialists | 82900 | 35000 | 2600 | 10400 | 2700 | 6400 | 13200 | 12600 |
| Men | 61600 | 26100 | 2400 | 8000 | 2200 | 4700 | 9200 | 9000 |
| Women | 21300 | 8900 | 100 | 2400 | 500 | 1700 | 4000 | 3700 |
| Environmental scientists | 4400 | 700 | 200 | 300 | 100 | 600 | 300 | 2300 |
| Men | 3700 | 500 | 200 | 300 | 100 | 500 | 300 | 1900 |
| Women | 700 | 100 | (1) | (1) | (1) | 200 | 100 | 400 |
| Life scientists | 39100 | 7600 | 2800 | 4300 | 1700 | 8100 | 4300 | 10300 |
| Men | 29500 | 5900 | 2300 | 3600 | 1500 | 4900 | 3300 | 8000 |
| Women | 9600 | 1700 | 500 | 700 | 200 | 3200 | 1000 | 2200 |
| Psychologists | 32800 | 9700 | 400 | 5100 | 1100 | 5700 | 3400 | 7400 |
| Men | 16700 | 3900 | 300 | 3100 | 500 | 2800 | 2200 | 3900 |
| Women | 16100 | 5800 | 100 | 2000 | 600 | 2900 | 1100 | 3500 |
| Social scientists | 71000 | 24600 | 1400 | 8700 | 5700 | 11500 | 6200 | 13000 |
| Men | 52300 | 19100 | 1300 | 6800 | 3800 | 6100 | 5400 | 9800 |
| Women | 18700 | 5500 | 100 | 1900 | 1900 | 5400 | 800 | 3200 |

See footnotes at end of table.

Table B-4. Scientists and engineers by field, sex and major reason for non-S/E employment: 1982-Continued

| Field and sex | Total employed in non-S/E | Preference | Promotion | Better pay | Location preference | Believe S/E not available | Other | No report |
|----------------------------|---------------------------|------------|-----------|------------|---------------------|---------------------------|-------|-----------|
| Total engineers | 128200 | 16800 | 18100 | 7900 | 3800 | 5400 | 9500 | 66800 |
| Men | 124200 | 15700 | 17700 | 7700 | 3300 | 4900 | 9300 | 65600 |
| Women | 4000 | 1100 | 400 | 200 | 500 | 500 | 200 | 1200 |
| Aeronautical/astronautical | 3700 | 200 | 300 | 300 | 200 | 200 | 100 | 2200 |
| Men | 3600 | 200 | 300 | 300 | 200 | 200 | 100 | 2200 |
| Women | 100 | (1) | (1) | (1) | (1) | (1) | (1) | 100 |
| Chemical | 6700 | 1000 | 1800 | 300 | 300 | 700 | 300 | 2400 |
| Men | 6300 | 1000 | 1800 | 300 | 300 | 600 | 200 | 2100 |
| Women | 400 | 100 | (1) | (1) | (1) | 100 | (1) | 200 |
| Civil | 14500 | 2100 | 1000 | 1000 | 500 | 900 | 1200 | 7700 |
| Men | 14300 | 2100 | 1000 | 1000 | 400 | 900 | 1200 | 7600 |
| Women | 200 | (1) | (1) | (1) | 100 | (1) | (1) | 100 |
| Electrical/electronics | 24200 | 2300 | 2600 | 1100 | 1000 | 900 | 1800 | 14400 |
| Men | 23200 | 2000 | 2300 | 1100 | 700 | 900 | 1800 | 14300 |
| Women | 1000 | 300 | 300 | (1) | 300 | (1) | (1) | 100 |
| Industrial | 12700 | 1900 | 3600 | 700 | 500 | 500 | 1100 | 4500 |
| Men | 12500 | 1900 | 3500 | 700 | 400 | 500 | 1100 | 4300 |
| Women | 200 | (1) | (1) | (1) | (1) | (1) | (1) | 200 |
| Materials | 3100 | 200 | 500 | 100 | 100 | 100 | 700 | 1500 |
| Men | 3000 | 200 | 500 | 100 | 100 | 100 | 600 | 1400 |
| Women | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Mechanical | 23500 | 3200 | 5100 | 1400 | 400 | 800 | 1400 | 11100 |
| Men | 23100 | 3100 | 5100 | 1400 | 400 | 800 | 1400 | 10900 |
| Women | 400 | 200 | (1) | (1) | (1) | (1) | (1) | 200 |
| Mining | 1700 | 200 | 300 | 100 | (1) | (1) | 200 | 800 |
| Men | 1700 | 200 | 300 | 100 | (1) | (1) | 200 | 800 |
| Women | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |

See footnotes at end of table.

Table B-4. Scientists and engineers by field, sex and major reason for non-S/E employment: 1982-Continued

| Field and sex | Total employed in non-S/E | Preference | Promotion | Better pay | Location preference | Believe S/E not available | Other | No report |
|-----------------|---------------------------|------------|-----------|------------|---------------------|---------------------------|-------|-----------|
| Nuclear | 600 | (1) | 100 | (1) | (1) | (1) | (1) | 400 |
| Men | 600 | (1) | 100 | (1) | (1) | (1) | (1) | 400 |
| Women | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Petroleum | 2600 | 400 | 400 | 400 | 100 | (1) | 200 | 1200 |
| Men | 2600 | 400 | 400 | 400 | 100 | (1) | 200 | 1200 |
| Women | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other engineers | 35100 | 5100 | 2300 | 2500 | 700 | 1200 | 2600 | 20700 |
| Men | 33400 | 4600 | 2200 | 2300 | 600 | 800 | 2500 | 20300 |
| Women | 1700 | 600 | (1) | 100 | (1) | 400 | 100 | 400 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

Table B-5. Average annual salaries of scientists and engineers by field and sex/race/ethnic group: 1982

| Field | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|------------------------------|----------|----------|----------|----------|----------|----------|-----------------|----------|----------|
| Total, all fields | \$34,000 | \$35,000 | \$26,300 | \$34,100 | \$29,900 | \$34,200 | \$34,000 | \$30,800 | \$31,400 |
| Total scientists | 31,700 | 33,400 | 25,800 | 31,800 | 28,500 | 32,400 | 32,600 | 28,000 | 27,600 |
| Physical scientists | 34,700 | 35,500 | 26,400 | 34,900 | 30,100 | 32,500 | 42,500 | 28,600 | 33,600 |
| Chemists | 33,600 | 34,600 | 25,500 | 33,900 | 29,500 | 30,400 | 42,300 | 24,300 | 29,800 |
| Physicists/astronomers | 37,900 | 38,100 | 32,600 | 37,900 | 34,600 | 40,500 | 43,500 | 31,000 | 40,500 |
| Other physical scientists | 35,000 | 35,700 | 26,300 | 34,900 | 33,400 | 37,100 | 42,100 | 35,900 | 39,800 |
| Mathematical scientists | 34,800 | 37,500 | 29,100 | 35,000 | 31,600 | 34,500 | 31,200 | 29,600 | 25,400 |
| Mathematicians | 35,400 | 37,700 | 29,500 | 35,600 | 31,800 | 36,200 | 31,200 | 29,700 | 30,000 |
| Statisticians | 32,800 | 36,700 | 28,100 | 33,000 | 30,900 | 28,600 | (1) | 29,200 | 17,200 |
| Computer specialists | 32,200 | 33,500 | 28,800 | 32,300 | 31,100 | 32,000 | 33,000 | 29,400 | 30,600 |
| Environmental scientists | 36,800 | 38,000 | 29,900 | 36,700 | 30,700 | 37,200 | 46,600 | 39,300 | 38,500 |
| Earth scientists | 37,600 | 39,000 | 30,300 | 37,500 | 31,200 | 38,100 | 42,200 | 40,700 | 39,800 |
| Oceanographers | 34,600 | 36,500 | 22,300 | 33,400 | 28,200 | 30,000 | 56,400 | (1) | 22,400 |
| Atmospheric scientists | 32,700 | 33,100 | 28,500 | 32,600 | 29,400 | 33,600 | (1) | 32,100 | 31,400 |
| Life scientists | 28,900 | 30,400 | 22,500 | 29,000 | 27,700 | 28,100 | 30,800 | 23,900 | 25,600 |
| Biological scientists | 28,200 | 29,500 | 22,500 | 28,300 | 28,000 | 27,400 | 25,800 | 22,000 | 24,100 |
| Agricultural scientists | 27,500 | 28,800 | 17,900 | 27,400 | 26,300 | 28,100 | 35,700 | 18,200 | 27,600 |
| Medical scientists | 38,900 | 42,600 | 28,200 | 39,300 | 27,100 | 32,000 | 34,500 | 39,300 | 30,700 |
| Psychologists | 28,800 | 31,700 | 23,900 | 29,000 | 25,900 | 28,400 | 23,300 | 23,200 | 20,400 |
| Social scientists | 30,600 | 33,000 | 24,300 | 30,700 | 26,400 | 34,300 | 29,000 | 27,300 | 24,100 |
| Economists | 34,700 | 35,900 | 29,600 | 34,700 | 31,100 | 37,200 | 28,700 | 31,600 | 31,000 |
| Sociologists/anthropologists | 24,900 | 27,000 | 21,600 | 24,900 | 23,800 | 26,700 | 28,500 | 25,600 | 18,100 |
| Other social scientists | 29,200 | 32,100 | 22,700 | 29,500 | 26,700 | 29,000 | 32,000 | 25,500 | 25,900 |
| Total engineers | 35,800 | 36,000 | 29,000 | 35,900 | 31,700 | 35,100 | 35,000 | 32,800 | 33,700 |
| Aeronautical/astronautical | 38,500 | 38,900 | 27,800 | 38,700 | 33,400 | 36,900 | 28,300 | 36,100 | 34,000 |
| Chemical | 39,200 | 39,700 | 31,100 | 39,700 | 30,900 | 35,400 | 26,300 | 33,600 | 33,900 |
| Civil | 33,500 | 33,700 | 26,100 | 33,600 | 30,800 | 33,700 | 35,500 | 29,400 | 30,500 |

See footnotes at end of table.

Table B-5. Average annual salaries of scientists and engineers by field and sex/race/ethnic group: 1982-Continued

| Field | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|------------------------|----------|----------|----------|----------|----------|----------|-----------------|----------|----------|
| Electrical/electronics | \$36,400 | \$36,500 | \$29,800 | \$36,500 | \$33,200 | \$36,200 | \$35,700 | \$34,600 | \$35,600 |
| Industrial | 32,700 | 33,000 | 26,900 | 32,900 | 27,900 | 31,600 | 33,200 | 26,800 | 32,100 |
| Materials | 36,900 | 37,300 | 28,600 | 37,200 | 32,000 | 32,400 | 41,000 | 30,500 | 31,600 |
| Mechanical | 36,300 | 36,400 | 29,300 | 36,400 | 32,400 | 35,400 | 38,000 | 33,800 | 35,800 |
| Mining | 37,500 | 38,000 | 24,900 | 37,800 | 25,500 | 33,600 | 28,000 | 12,100 | 27,900 |
| Nuclear | 38,400 | 38,600 | 30,200 | 38,600 | 36,100 | 34,700 | (1) | 38,300 | 31,800 |
| Petroleum | 44,600 | 45,200 | 35,300 | 44,800 | 34,600 | 46,300 | 32,800 | 46,400 | 40,800 |
| Other engineers | 34,600 | 34,900 | 29,100 | 34,700 | 31,000 | 35,100 | 33,600 | 32,900 | 33,000 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

Table B-6. Average total professional income of scientists and engineers by field and sex/race/ethnic group: 1982

| Field | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|------------------------------|----------|----------|----------|----------|----------|----------|-----------------|----------|----------|
| Total, all fields | \$31,800 | \$33,200 | \$22,100 | \$31,900 | \$28,000 | \$32,100 | \$33,600 | \$28,300 | \$29,100 |
| Total scientists | 28,500 | 30,700 | 21,600 | 28,600 | 26,100 | 29,200 | 31,800 | 24,300 | 24,000 |
| Physical scientists | 31,700 | 32,800 | 21,900 | 31,900 | 28,300 | 29,200 | 42,700 | 26,700 | 30,700 |
| Chemists | 30,800 | 32,100 | 21,500 | 31,100 | 27,500 | 27,300 | 44,200 | 22,400 | 27,800 |
| Physicists/astronomers | 34,200 | 34,800 | 24,500 | 34,300 | 32,300 | 35,800 | 38,300 | 28,800 | 38,100 |
| Other physical scientists | 32,300 | 33,200 | 22,500 | 32,200 | 35,300 | 34,300 | 40,900 | 36,000 | 32,000 |
| Mathematical scientists | 30,100 | 33,100 | 24,300 | 30,400 | 28,000 | 28,000 | 29,700 | 20,400 | 20,600 |
| Mathematicians | 30,100 | 32,800 | 23,700 | 30,300 | 28,600 | 28,700 | 29,700 | 19,700 | 22,700 |
| Statisticians | 30,300 | 34,000 | 25,600 | 30,800 | 26,500 | 25,600 | (1) | 24,900 | 16,500 |
| Computer specialists | 29,700 | 31,300 | 25,200 | 29,800 | 28,900 | 29,100 | 32,800 | 26,100 | 29,400 |
| Environmental scientists | 33,000 | 34,700 | 24,400 | 32,800 | 27,900 | 35,300 | 49,300 | 33,900 | 35,700 |
| Earth scientists | 33,400 | 35,300 | 24,500 | 33,200 | 27,900 | 35,900 | 50,500 | 34,800 | 34,500 |
| Oceanographers | 30,900 | 32,500 | 20,800 | 31,100 | 27,200 | 27,100 | 35,000 | 2,300 | 24,400 |
| Atmospheric scientists | 31,200 | 31,800 | 24,700 | 31,100 | 28,200 | 33,400 | (1) | 29,800 | 27,900 |
| Life scientists | 25,900 | 27,800 | 18,100 | 25,900 | 25,800 | 26,000 | 30,600 | 18,700 | 21,300 |
| Biological scientists | 25,000 | 26,900 | 17,900 | 25,100 | 25,800 | 25,100 | 25,200 | 15,400 | 20,300 |
| Agricultural scientists | 24,600 | 26,700 | 13,400 | 24,500 | 26,600 | 24,800 | 35,600 | 18,000 | 19,700 |
| Medical scientists | 37,300 | 40,800 | 27,500 | 37,600 | 23,300 | 33,100 | 35,000 | 41,600 | 32,800 |
| Psychologists | 26,000 | 29,900 | 20,200 | 26,200 | 22,700 | 26,300 | 17,400 | 20,000 | 17,600 |
| Social scientists | 27,000 | 29,900 | 19,900 | 27,000 | 24,000 | 30,300 | 31,800 | 24,700 | 20,900 |
| Economists | 31,700 | 33,000 | 25,800 | 31,500 | 26,100 | 34,100 | 39,900 | 30,600 | 27,700 |
| Sociologists/anthropologists | 21,000 | 24,100 | 16,700 | 20,800 | 21,900 | 22,500 | 23,100 | 23,100 | 15,700 |
| Other social scientists | 25,600 | 28,900 | 18,800 | 25,800 | 24,800 | 23,400 | 28,000 | 21,900 | 20,800 |
| Total engineers | 34,400 | 34,700 | 25,400 | 34,600 | 30,400 | 33,700 | 34,800 | 31,300 | 32,500 |
| Aeronautical/astronautical | 37,700 | 38,000 | 25,400 | 37,800 | 32,100 | 36,500 | 30,600 | 40,000 | 35,100 |
| Chemical | 36,700 | 37,300 | 27,000 | 37,200 | 28,000 | 33,300 | 25,900 | 31,400 | 31,000 |
| Civil | 32,500 | 32,700 | 23,600 | 32,600 | 30,000 | 33,300 | 32,500 | 27,700 | 29,600 |

See footnotes at end of table.

Table B-6. Average total professional income of scientists and engineers by field and sex/race/ethnic group: 1982-Continued

| Field | Total | Male | Female | White | Black | Asian | Native American | Other | Hispanic |
|------------------------|----------|----------|----------|----------|----------|----------|-----------------|----------|----------|
| Electrical/electronics | \$34,700 | \$34,900 | \$25,200 | \$34,800 | \$31,600 | \$34,100 | \$36,000 | \$32,200 | \$34,100 |
| Industrial | 32,000 | 32,300 | 24,100 | 32,100 | 27,800 | 31,300 | 32,700 | 24,100 | 30,800 |
| Materials | 35,500 | 35,900 | 25,800 | 35,900 | 30,000 | 30,100 | 39,500 | 30,300 | 29,300 |
| Mechanical | 35,100 | 35,300 | 24,600 | 35,200 | 30,200 | 34,300 | 38,200 | 32,400 | 34,400 |
| Mining | 34,300 | 34,800 | 21,100 | 34,400 | 25,600 | 34,700 | 28,000 | 21,400 | 23,800 |
| Nuclear | 36,200 | 36,400 | 25,400 | 36,300 | 34,100 | 35,300 | (1) | 33,100 | 29,100 |
| Petroleum | 40,600 | 41,300 | 31,000 | 40,900 | 33,600 | 40,400 | 30,400 | 41,800 | 36,600 |
| Other engineers | 33,700 | 34,100 | 25,900 | 33,800 | 29,900 | 33,500 | 34,000 | 32,100 | 32,800 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|----------------|-----------------------|--------------------|---------------|-------------------|---------------|--------------|
| Total, all fields | 3253000 | 2186400 | 391800 | 284400 | 168500 | 143300 | 78500 |
| Energy | 495400 | 435300 | 12600 | 25400 | 9300 | 11100 | 1700 |
| Health | 211900 | 86900 | 46200 | 17300 | 12400 | 47900 | 1200 |
| Environment | 213500 | 103100 | 11900 | 50000 | 40600 | 6400 | 1600 |
| Teaching | 216800 | 14100 | 197500 | 600 | 800 | 3200 | 700 |
| Other educational | 61700 | 8400 | 43900 | 1400 | 2800 | 4800 | 300 |
| National defense | 422800 | 293500 | 5900 | 96000 | 1600 | 24700 | 1100 |
| Crime | 20300 | 6700 | 1100 | 1500 | 10100 | 800 | 100 |
| Food | 106400 | 71100 | 16400 | 12900 | 3400 | 2400 | 200 |
| Other mineral resources | 34000 | 26300 | 1300 | 4300 | 1600 | 300 | 100 |
| Community development | 78300 | 40100 | 4000 | 3500 | 23400 | 6800 | 700 |
| Housing | 59900 | 52300 | 1500 | 2200 | 3000 | 600 | 300 |
| None of the above | 1164500 | 974400 | 38800 | 62800 | 54500 | 30700 | 3400 |
| Not reported | 167500 | 74200 | 10800 | 6600 | 5100 | 3600 | 67200 |
| Total scientists | 1405700 | 712300 | 341100 | 152900 | 83100 | 100700 | 15700 |
| Energy | 120700 | 96300 | 6700 | 10900 | 3100 | 3400 | 400 |
| Health | 173800 | 59200 | 44200 | 15100 | 10100 | 44100 | 1100 |
| Environment | 117800 | 35400 | 10600 | 40400 | 25200 | 5200 | 1000 |
| Teaching | 187200 | 7200 | 175300 | 500 | 800 | 2900 | 500 |
| Other educational | 53700 | 5500 | 39800 | 1100 | 2400 | 4600 | 300 |
| National defense | 85000 | 46100 | 2900 | 27500 | 300 | 7700 | 400 |
| Crime | 17200 | 4200 | 1100 | 1400 | 9800 | 700 | (1) |
| Food | 77500 | 44900 | 15500 | 11700 | 3000 | 2300 | 200 |
| Other mineral resources | 14900 | 9600 | 700 | 3500 | 1100 | (1) | 100 |
| Community development | 29700 | 11800 | 3600 | 1800 | 6300 | 5800 | 400 |
| Housing | 9700 | 8200 | 900 | 400 | 200 | (1) | (1) |
| None of the above | 477800 | 368700 | 31500 | 35500 | 19400 | 21400 | 1300 |
| Not reported | 40700 | 15200 | 8300 | 3100 | 1500 | 2400 | 10100 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Physical scientists | 227400 | 135800 | 48400 | 24000 | 6300 | 10200 | 2600 |
| Energy | 29900 | 20900 | 3800 | 3300 | (1) | 1800 | 100 |
| Health | 22000 | 13900 | 2300 | 2600 | 700 | 2400 | 200 |
| Environment | 21100 | 11900 | 900 | 3600 | 3500 | 1100 | (1) |
| Teaching | 31100 | 400 | 30300 | (1) | (1) | 300 | 100 |
| Other educational | 2900 | 500 | 2400 | (1) | 100 | (1) | (1) |
| National defense | 24900 | 12400 | 1500 | 8300 | (1) | 2600 | (1) |
| Crime | 1100 | (1) | (1) | 300 | 700 | (1) | (1) |
| Food | 8400 | 6800 | 100 | 1100 | 400 | (1) | (1) |
| Other mineral resources | 3600 | 2800 | 100 | 700 | (1) | (1) | (1) |
| Community development | 600 | 500 | (1) | (1) | (1) | (1) | (1) |
| Housing | 1400 | 1400 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 72800 | 60200 | 6100 | 3700 | 700 | 2000 | (1) |
| Not reported | 7700 | 4200 | 1000 | 300 | 100 | (1) | 2100 |
| Mathematical scientists | 79400 | 26300 | 37300 | 10800 | 1600 | 2400 | 1000 |
| Energy | 3500 | 2600 | 400 | 300 | 100 | 100 | (1) |
| Health | 6500 | 2100 | 1500 | 1400 | 400 | 1100 | (1) |
| Environment | 1300 | 700 | 100 | 200 | 200 | (1) | (1) |
| Teaching | 31800 | (1) | 31500 | 200 | (1) | (1) | (1) |
| Other educational | 2100 | 100 | 1800 | (1) | (1) | 200 | (1) |
| National defense | 11100 | 5300 | 200 | 4800 | (1) | 400 | 200 |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | 1300 | 600 | 300 | 400 | (1) | (1) | (1) |
| Other mineral resources | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Community development | 800 | 400 | (1) | 100 | 200 | 100 | (1) |
| Housing | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 19000 | 13700 | 1100 | 3100 | 700 | 400 | 100 |
| Not reported | 1500 | 300 | 400 | 100 | 100 | 100 | 600 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Computer specialists | 299000 | 237100 | 16800 | 20800 | 10700 | 10800 | 2800 |
| Energy | 17400 | 15500 | 100 | 1100 | 400 | 300 | 100 |
| Health | 11300 | 6200 | 700 | 1200 | 300 | 2900 | (1) |
| Environment | 2500 | 1300 | (1) | 800 | 300 | 100 | (1) |
| Teaching | 10000 | 3600 | 6000 | (1) | 100 | 300 | 100 |
| Other educational | 8100 | 2400 | 4700 | 100 | 600 | 300 | (1) |
| National defense | 34900 | 23600 | 400 | 8500 | 200 | 2000 | 100 |
| Crime | 2600 | 1200 | (1) | 200 | 1200 | (1) | (1) |
| Food | 3900 | 3200 | 300 | 400 | (1) | (1) | (1) |
| Other mineral resources | 1100 | 700 | 200 | 200 | (1) | (1) | (1) |
| Community development | 5900 | 3600 | 500 | 200 | (1) | (1) | (1) |
| Housing | 800 | 800 | (1) | (1) | 1400 | 300 | (1) |
| None of the above | 193100 | 170900 | 3700 | 7200 | 6200 | 4500 | 600 |
| Not reported | 7400 | 4300 | 200 | 700 | 200 | 100 | 1900 |
| Environmental scientists | 37200 | 54200 | 10800 | 14900 | 4200 | 2100 | 1000 |
| Energy | 45900 | 40800 | 1100 | 2700 | 1000 | 200 | 200 |
| Health | 200 | 190 | 100 | (1) | 100 | (1) | (1) |
| Environment | 12300 | 2800 | 1900 | 5000 | 1700 | 800 | 100 |
| Teaching | 5500 | 100 | 5200 | 100 | (1) | (1) | (1) |
| Other educational | 500 | 200 | 200 | (1) | (1) | (1) | (1) |
| National defense | 3300 | 600 | 100 | 2100 | (1) | 700 | (1) |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | 900 | 400 | (1) | 400 | (1) | (1) | (1) |
| Other mineral resources | 7300 | 4200 | 400 | 1700 | 900 | (1) | 100 |
| Community development | 800 | 300 | 100 | 100 | 100 | (1) | (1) |
| Housing | 400 | 400 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 7700 | 3300 | 1500 | 2400 | 300 | 200 | (1) |
| Not reported | 2400 | 1000 | 300 | 400 | 100 | 100 | 600 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|---------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Life scientists | 337 100 | 110300 | 109800 | 57100 | 33400 | 23200 | 3200 |
| Energy | 8700 | 5700 | 600 | 1500 | 800 | 100 | (1) |
| Health | 75700 | 20200 | 29400 | 7400 | 3800 | 14300 | 600 |
| Environment | 72600 | 15700 | 6200 | 29400 | 18200 | 2500 | 600 |
| Teaching | 43900 | 700 | 42000 | 100 | 300 | 800 | 100 |
| Other educational | 6500 | 500 | 4500 | 400 | 300 | 700 | (1) |
| National defense | 2000 | 700 | 100 | 800 | 100 | 300 | (1) |
| Crime | 1200 | 400 | (1) | 200 | 600 | (1) | (1) |
| Food | 51800 | 26100 | 13500 | 8000 | 2300 | 1500 | 200 |
| Other mineral resources | 1700 | 1000 | (1) | 600 | 100 | (1) | (1) |
| Community development | 2300 | 1100 | 400 | 100 | 700 | 100 | (1) |
| Housing | 1600 | 1400 | 100 | 200 | (1) | (1) | (1) |
| None of the above | 59900 | 35000 | 9500 | 7400 | 5500 | 2300 | 200 |
| Not reported | 9200 | 2000 | 3300 | 1000 | 600 | 700 | 1600 |
| Psychologists | 138400 | 45300 | 52200 | 3300 | 8100 | 27300 | 2300 |
| Energy | 2400 | 2400 | (1) | (1) | 100 | (1) | (1) |
| Health | 42200 | 13400 | 7200 | 1000 | 3200 | 17000 | 300 |
| Environment | 1300 | 800 | 300 | (1) | 100 | (1) | (1) |
| Teaching | 21300 | 1400 | 19000 | (1) | 200 | 600 | (1) |
| Other educational | 22400 | 1100 | 18400 | 200 | 400 | 2000 | 300 |
| National defense | 2400 | 1000 | 100 | 600 | (1) | 700 | (1) |
| Crime | 2700 | 200 | 200 | (1) | 2000 | 300 | (1) |
| Food | 2300 | 1900 | 100 | (1) | 100 | 100 | (1) |
| Other mineral resources | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Community development | 6100 | 1700 | 900 | 100 | 900 | 2400 | 100 |
| Housing | 1000 | 700 | 200 | (1) | (1) | (1) | (1) |
| None of the above | 29200 | 19500 | 4000 | 1300 | 900 | 3400 | 100 |
| Not reported | 5100 | 1200 | 1600 | (1) | 100 | 800 | 1400 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|---------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Social scientists | 237200 | 103200 | 65700 | 22100 | 18700 | 24700 | 2900 |
| Energy | 12800 | 8300 | 700 | 2100 | 800 | 900 | (1) |
| Health | 15800 | 3400 | 2900 | 1400 | 1600 | 6400 | (1) |
| Environment | 6800 | 2300 | 1100 | 1500 | 1100 | 700 | 100 |
| Teaching | 43600 | 1000 | 41300 | 100 | 100 | 1000 | 200 |
| Other educational | 11000 | 700 | 7800 | 200 | 900 | 1400 | (1) |
| National defense | 6500 | 2600 | 600 | 2400 | (1) | 1000 | (1) |
| Crime | 9500 | 2400 | 900 | 600 | 5200 | 500 | (1) |
| Food | 9000 | 5800 | 1100 | 1400 | 100 | 500 | (1) |
| Other mineral resources | 1000 | 600 | 100 | 200 | 100 | (1) | (1) |
| Community development | 13200 | 4300 | 1500 | 1100 | 2900 | 3000 | 300 |
| Housing | 4300 | 3200 | 500 | 300 | 200 | (1) | (1) |
| None of the above | 96200 | 66200 | 5600 | 10400 | 5200 | 8600 | 200 |
| Not reported | 7500 | 2400 | 1500 | 600 | 400 | 700 | 2000 |
| Total engineers | 1847200 | 1474200 | 50700 | 131600 | 85400 | 42600 | 62800 |
| Energy | 374700 | 339000 | 5900 | 14500 | 6300 | 7700 | 1300 |
| Health | 38100 | 27700 | 1900 | 2200 | 2300 | 3800 | 100 |
| Environment | 95700 | 67600 | 1300 | 9600 | 15400 | 1200 | 600 |
| Teaching | 29600 | 6900 | 22100 | 100 | (1) | 200 | 200 |
| Other educational | 8100 | 2900 | 4100 | 300 | 500 | 200 | (1) |
| National defense | 337800 | 247400 | 2900 | 68500 | 1300 | 17000 | 700 |
| Crime | 3100 | 2500 | (1) | 100 | 300 | 100 | 100 |
| Food | 28800 | 26300 | 900 | 1100 | 300 | 200 | 100 |
| Other mineral resources | 19100 | 16800 | 600 | 900 | 600 | 300 | (1) |
| Community development | 48600 | 28200 | 400 | 1700 | 17000 | 900 | 300 |
| Housing | 50200 | 44200 | 600 | 1700 | 2800 | 600 | 300 |
| None of the above | 686700 | 605600 | 7300 | 27300 | 35100 | 9300 | 2100 |
| Not reported | 126800 | 59000 | 2600 | 3500 | 3600 | 1100 | 57000 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Aeronautical/astronautical | 80800 | 59800 | 2300 | 13300 | 400 | 2700 | 2400 |
| Energy | 3200 | 2400 | 200 | 600 | (1) | (1) | (1) |
| Health | 100 | (1) | 100 | (1) | (1) | (1) | (1) |
| Environment | 400 | 100 | (1) | 200 | (1) | 100 | (1) |
| Teaching | 1300 | 100 | 1100 | (1) | (1) | 100 | (1) |
| Other educational | 300 | 100 | 100 | (1) | (1) | (1) | (1) |
| National defense | 48000 | 38800 | 200 | 7000 | 100 | 2000 | 100 |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Community development | 300 | 100 | (1) | 100 | 100 | 100 | (1) |
| Housing | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| None of the above | 22100 | 16100 | 500 | 4900 | 200 | 300 | 100 |
| Not reported | 4800 | 1700 | 200 | 600 | (1) | 100 | 2200 |
| Chemical | 107700 | 97200 | 2900 | 2900 | 800 | 1600 | 2300 |
| Energy | 37200 | 34800 | 700 | 600 | 100 | 800 | 200 |
| Health | 4100 | 3700 | 100 | 100 | 100 | 100 | (1) |
| Environment | 10600 | 9700 | (1) | 400 | 300 | 100 | 100 |
| Teaching | 1500 | 200 | 1300 | (1) | (1) | (1) | (1) |
| Other educational | 200 | (1) | 200 | (1) | (1) | (1) | (1) |
| National defense | 5300 | 3400 | (1) | 1500 | 100 | 200 | 100 |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | 4400 | 4100 | 200 | (1) | (1) | (1) | (1) |
| Other mineral resources | 2400 | 2200 | (1) | 100 | 100 | (1) | (1) |
| Community development | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Housing | 400 | 400 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 36100 | 35400 | 300 | 100 | 100 | 300 | (1) |
| Not reported | 5400 | 3200 | 200 | 100 | (1) | (1) | 2000 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Civil | 258200 | 157200 | 5700 | 24300 | 57100 | 5300 | 8500 |
| Energy | 40500 | 34800 | 100 | 2800 | 1700 | 800 | 300 |
| Health | 3600 | 2100 | (1) | 200 | 1100 | 200 | (1) |
| Environment | 24200 | 14000 | 300 | 3600 | 5900 | 300 | (1) |
| Teaching | 3500 | 500 | 2900 | (1) | (1) | (1) | 100 |
| Other educational | 1500 | 200 | 800 | 100 | 300 | 100 | (1) |
| National defense | 11600 | 4300 | (1) | 5400 | 500 | 1400 | (1) |
| Crime | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Food | 1900 | 1300 | (1) | 400 | 200 | (1) | 100 |
| Other mineral resources | 3300 | 2600 | (1) | 300 | 300 | 100 | (1) |
| Community development | 29300 | 13100 | 100 | 1100 | 14600 | 300 | (1) |
| Housing | 29300 | 25100 | 300 | 1200 | 2300 | 300 | 200 |
| None of the above | 91500 | 52700 | 600 | 8500 | 28000 | 1600 | 100 |
| Not reported | 17800 | 6400 | 500 | 600 | 2300 | 200 | 7700 |
| Electrical/electronics | 437700 | 354000 | 13300 | 38900 | 4700 | 12200 | 14500 |
| Energy | 70200 | 62700 | 700 | 3600 | 1900 | 1300 | 100 |
| Health | 6300 | 4900 | 600 | 300 | (1) | 400 | 100 |
| Environment | 5000 | 3700 | 200 | 800 | 300 | 100 | (1) |
| Teaching | 7700 | 2100 | 5300 | 100 | (1) | 100 | 100 |
| Other educational | 2900 | 1300 | 1400 | 200 | (1) | (1) | (1) |
| National defense | 123400 | 88500 | 1400 | 26100 | 100 | 7000 | 200 |
| Crime | 1300 | 1200 | (1) | 100 | (1) | (1) | (1) |
| Food | 3400 | 3400 | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | 1100 | 1000 | 100 | (1) | 100 | (1) | (1) |
| Community development | 5800 | 5100 | 100 | (1) | 400 | 100 | 100 |
| Housing | 4800 | 4300 | 100 | 200 | (1) | 100 | 100 |
| None of the above | 176400 | 162100 | 2700 | 6700 | 1500 | 2900 | 500 |
| Not reported | 29300 | 13800 | 800 | 800 | 400 | 300 | 13300 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Industrial | 113100 | 100200 | 1900 | 4400 | 1100 | 1700 | 3900 |
| Energy | 10800 | 10500 | 100 | 100 | (1) | 100 | (1) |
| Health | 3500 | 2300 | (1) | (1) | 300 | 800 | 100 |
| Environment | 3700 | 3300 | (1) | 300 | (1) | (1) | 100 |
| Teaching | 2600 | 1300 | 1200 | (1) | (1) | (1) | (1) |
| Other educational | 200 | 100 | 100 | (1) | (1) | (1) | (1) |
| National defense | 15000 | 11100 | 100 | 3400 | 100 | 300 | (1) |
| Crime | 400 | 200 | (1) | (1) | 100 | 100 | 100 |
| Food | 3100 | 3100 | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | 400 | 400 | (1) | (1) | (1) | (1) | (1) |
| Community development | 1300 | 1000 | (1) | (1) | 300 | (1) | (1) |
| Housing | 1100 | 1100 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 62400 | 60600 | 200 | 500 | 400 | 400 | 200 |
| Not reported | 8600 | 5000 | (1) | 100 | (1) | 100 | 3300 |
| Materials | 39200 | 33400 | 2300 | 2000 | 200 | 600 | 700 |
| Energy | 7500 | 6000 | 800 | 300 | 100 | 200 | (1) |
| Health | 700 | 600 | (1) | (1) | (1) | 100 | (1) |
| Environment | 800 | 800 | (1) | (1) | (1) | (1) | (1) |
| Teaching | 700 | (1) | 700 | (1) | (1) | (1) | (1) |
| Other educational | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| National defense | 8100 | 6500 | 100 | 1300 | (1) | 200 | 100 |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | 2400 | 2000 | 200 | 100 | (1) | 100 | (1) |
| Community development | 200 | 100 | (1) | (1) | 100 | (1) | (1) |
| Housing | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 16000 | 15300 | 400 | 200 | (1) | 100 | (1) |
| Not reported | 2200 | 1400 | (1) | 100 | (1) | (1) | 700 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Mechanical | 357900 | 310500 | 10100 | 18100 | 3200 | 6000 | 9900 |
| Energy | 96700 | 89500 | 1600 | 2600 | 900 | 1700 | 300 |
| Health | 7700 | 6400 | 200 | 300 | 100 | 600 | (1) |
| Environment | 11900 | 11000 | 100 | 200 | 500 | (1) | 100 |
| Teaching | 6300 | 900 | 5400 | (1) | (1) | (1) | (1) |
| Other educational | 800 | 300 | 500 | (1) | (1) | (1) | (1) |
| National defense | 53500 | 39000 | 300 | 11800 | 300 | 2000 | 100 |
| Crime | 400 | 400 | (1) | (1) | (1) | (1) | (1) |
| Food | 7700 | 7500 | 200 | (1) | (1) | (1) | (1) |
| Other mineral resources | 2900 | 2800 | (1) | (1) | 100 | (1) | (1) |
| Community development | 2700 | 2400 | 100 | (1) | 100 | 100 | (1) |
| Housing | 5700 | 4800 | 200 | 200 | 300 | (1) | 100 |
| None of the above | 139900 | 133600 | 1100 | 2600 | 800 | 1200 | 500 |
| Not reported | 21700 | 11900 | 400 | 400 | 100 | 200 | 8700 |
| Mining | 14200 | 12100 | 600 | 600 | 400 | 200 | 200 |
| Energy | 7500 | 7100 | 100 | 200 | 100 | (1) | 100 |
| Health | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Environment | 800 | 500 | 100 | 100 | 100 | 100 | (1) |
| Teaching | 100 | (1) | 100 | (1) | (1) | (1) | (1) |
| Other educational | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| National defense | 300 | 200 | 100 | 100 | (1) | (1) | (1) |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | 3600 | 3000 | 100 | 200 | 100 | 100 | (1) |
| Community development | 200 | (1) | (1) | (1) | 100 | (1) | (1) |
| Housing | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 700 | 600 | 100 | (1) | (1) | (1) | (1) |
| Not reported | 760 | 400 | (1) | 100 | (1) | (1) | 200 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|-------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Nuclear | 18200 | 12200 | 500 | 3300 | 200 | 1400 | 700 |
| Energy | 12700 | 10200 | 200 | 1500 | (1) | 800 | (1) |
| Health | 300 | (1) | 100 | 200 | (1) | (1) | (1) |
| Environment | 200 | (1) | (1) | 100 | (1) | (1) | (1) |
| Teaching | 100 | 100 | 100 | (1) | (1) | (1) | (1) |
| Other educational | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| National defense | 3300 | 1300 | (1) | 1400 | (1) | 600 | (1) |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Community development | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Housing | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| None of the above | 400 | 200 | 100 | (1) | 100 | (1) | (1) |
| Not reported | 1200 | 400 | (1) | 100 | (1) | 100 | 700 |
| Petroleum | 27700 | 24400 | 200 | 800 | 300 | 400 | 1600 |
| Energy | 24100 | 22700 | 100 | 600 | 300 | 200 | 100 |
| Health | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Environment | 200 | 100 | (1) | (1) | 100 | (1) | (1) |
| Teaching | 100 | (1) | 100 | (1) | (1) | (1) | (1) |
| Other educational | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| National defense | 200 | (1) | (1) | 100 | (1) | 100 | (1) |
| Crime | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Food | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other mineral resources | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| Community development | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Housing | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| None of the above | 800 | 700 | (1) | 100 | (1) | (1) | (1) |
| Not reported | 1900 | 500 | (1) | (1) | (1) | (1) | 1400 |

See footnotes at end of table.

Table B-7. Scientists and engineers by field, area of critical national interest and type of employer: 1982-Continued

| Field and area of interest | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Other engineers | 392500 | 313100 | 10800 | 22900 | 17000 | 10600 | 18100 |
| Energy | 64400 | 58300 | 1200 | 1700 | 1200 | 1700 | 100 |
| Health | 11900 | 7600 | 900 | 1000 | 700 | 1600 | (1) |
| Environment | 37800 | 24400 | 700 | 3900 | 8100 | 500 | 300 |
| Teaching | 5700 | 1800 | 3900 | (1) | (1) | (1) | (1) |
| Other educational | 2200 | 800 | 1000 | (1) | (1) | (1) | (1) |
| National defense | 69100 | 54400 | 700 | 10600 | 200 | 200 | (1) |
| Crime | 800 | 600 | (1) | (1) | 100 | 3200 | 100 |
| Food | 7600 | 6300 | 500 | 700 | 200 | (1) | (1) |
| Other mineral resources | 2500 | 2200 | 200 | 100 | 100 | 100 | (1) |
| Community development | 8600 | 6200 | 100 | 400 | (1) | (1) | (1) |
| Housing | 8400 | 7900 | (1) | 100 | 1400 | 400 | 200 |
| None of the above | 140400 | 128300 | 1300 | 3700 | 200 | 200 | 100 |
| Not reported | 33100 | 14300 | 500 | 700 | 3900 | 2500 | 600 |
| | | | | | 800 | 100 | 16700 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|----------------|-----------------------|--------------------|---------------|-------------------|---------------|--------------|
| Total, all fields | 3253000 | 2186400 | 391800 | 284400 | 168500 | 143300 | 78500 |
| AID | 5600 | 2000 | 1700 | 1000 | 200 | 800 | (1) |
| Dept. of Agriculture | 81000 | 8700 | 20500 | 42700 | 7400 | 1400 | 200 |
| Dept. of Commerce | 23900 | 5300 | 2700 | 12400 | 2400 | 1100 | (1) |
| Dept. of Defense | 423600 | 273400 | 12500 | 108400 | 1400 | 26900 | 1100 |
| Dept. of Energy | 105000 | 59600 | 11900 | 18000 | 3000 | 11600 | 700 |
| Dept. of Education | 26900 | 3000 | 19300 | 600 | 1500 | 2600 | (1) |
| Dept. of HHS | 90600 | 8200 | 38600 | 13600 | 8600 | 20800 | 800 |
| Dept. of HUD | 16500 | 10200 | 100 | 1000 | 4500 | 600 | (1) |
| Dept. of Interior | 42400 | 6500 | 3600 | 22300 | 8700 | 1200 | 100 |
| Dept. of Justice | 6200 | 1600 | 1000 | 1700 | 1200 | 700 | (1) |
| Dept. of Labor | 10300 | 1800 | 500 | 4000 | 3000 | 1000 | (1) |
| Dept. of Transportation | 71600 | 27800 | 1000 | 9000 | 31300 | 2300 | 200 |
| EPA | 58000 | 27200 | 2900 | 9100 | 16100 | 2800 | (1) |
| NASA | 82400 | 55800 | 6200 | 16500 | 300 | 3500 | 100 |
| NSF | 35100 | 3000 | 27800 | 700 | 300 | 2900 | 400 |
| NRC | 13300 | 7600 | 900 | 2300 | 300 | 2100 | 100 |
| Other agency | 34400 | 7400 | 3800 | 14500 | 2300 | 6100 | 200 |
| Agency unknown | 23900 | 7700 | 7100 | 1900 | 4100 | 2900 | 100 |
| No Federal support | 1772200 | 1449500 | 201200 | 8700 | 57100 | 48900 | 6700 |
| Support not known | 259800 | 121100 | 36500 | 6900 | 18100 | 10400 | 66800 |
| Total scientists | 1405700 | 712300 | 341100 | 152900 | 83100 | 100700 | 15700 |
| AID | 3700 | 200 | 1700 | 900 | 200 | 700 | (1) |
| Dept. of Agriculture | 68300 | 3600 | 19400 | 37200 | 6900 | 1100 | 200 |
| Dept. of Commerce | 17800 | 2100 | 2000 | 11000 | 2100 | 600 | (1) |
| Dept. of Defense | 96200 | 46600 | 6800 | 32900 | 500 | 9000 | 400 |
| Dept. of Energy | 38600 | 13300 | 7500 | 9800 | 1800 | 5800 | 500 |
| Dept. of Education | 21800 | 1700 | 16100 | 300 | 1300 | 2500 | (1) |
| Dept. of HHS | 82900 | 5000 | 36900 | 12800 | 8100 | 19400 | 800 |
| Dept. of HUD | 3700 | 1200 | 100 | 500 | 1400 | 500 | (1) |
| Dept. of Interior | 31800 | 3000 | 3300 | 17500 | 7200 | 800 | 100 |
| Dept. of Justice | 5100 | 900 | 900 | 1400 | 1200 | 700 | (1) |
| Dept. of Labor | 8800 | 1300 | 500 | 3400 | 2600 | 1000 | (1) |
| Dept. of Transportation | 9000 | 3400 | 500 | 2000 | 2100 | 200 | 100 |
| EPA | 20500 | 5000 | 2200 | 5200 | 6200 | 2000 | (1) |
| NASA | 17800 | 9400 | 3000 | 4300 | 100 | 500 | (1) |
| NSF | 28400 | 1100 | 23700 | 600 | 200 | 2000 | 300 |
| NRC | 5200 | 1900 | 500 | 1200 | 200 | 1300 | (1) |
| Other agency | 22700 | 2300 | 3400 | 9900 | 1400 | 5400 | 200 |
| Agency unknown | 15800 | 2500 | 6700 | 1000 | 3100 | 2400 | 100 |
| No Federal support | 727400 | 476200 | 179000 | 4100 | 27700 | 37600 | 2700 |
| Support not known | 92200 | 29200 | 31600 | 3700 | 9700 | 8300 | 9800 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Physical scientists | 227400 | 135800 | 48400 | 24000 | 6300 | 10200 | 2600 |
| AID | 200 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Agriculture | 1300 | (1) | 200 | 1000 | 100 | (1) | (1) |
| Dept. of Commerce | 1900 | 100 | 300 | 1400 | (1) | (1) | (1) |
| Dept. of Defense | 26100 | 11800 | 2700 | 9100 | (1) | 2500 | (1) |
| Dept. of Energy | 21000 | 6500 | 4400 | 5700 | 300 | 3800 | 300 |
| Dept. of Education | 500 | 100 | 400 | (1) | (1) | (1) | (1) |
| Dept. of HHS | 6800 | 400 | 2700 | 2200 | 400 | 1000 | 200 |
| Dept. of HUD | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 2000 | 300 | 300 | 1200 | 200 | (1) | (1) |
| Dept. of Justice | 200 | (1) | (1) | 200 | (1) | (1) | (1) |
| Dept. of Labor | 500 | (1) | (1) | 300 | (1) | 100 | (1) |
| Dept. of Transportation | 800 | 300 | (1) | 200 | 300 | 100 | (1) |
| EPA | 6300 | 1400 | 200 | 1200 | 2400 | 1100 | (1) |
| NASA | 5900 | 2800 | 1100 | 1700 | (1) | 300 | (1) |
| NSF | 8300 | 400 | 7500 | (1) | 190 | 300 | (1) |
| NRC | 2300 | 700 | (1) | 500 | (1) | 1000 | (1) |
| Other agency | 2200 | 200 | 300 | 1100 | (1) | 600 | (1) |
| Agency unknown | 1100 | 400 | 500 | (1) | 100 | (1) | (1) |
| No Federal support | 132000 | 102900 | 25400 | 600 | 1700 | 1300 | 200 |
| Support not known | 12500 | 5500 | 3500 | 300 | 900 | 300 | 1900 |
| Mathematical scientists | 79400 | 26300 | 37300 | 10800 | 1600 | 2400 | 1000 |
| AID | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 1100 | 200 | 200 | 700 | (1) | (1) | (1) |
| Dept. of Commerce | 1400 | 200 | (1) | 1200 | (1) | (1) | (1) |
| Dept. of Defense | 11800 | 5300 | 700 | 5100 | (1) | 500 | 200 |
| Dept. of Energy | 1700 | 1000 | 200 | 300 | (1) | 200 | (1) |
| Dept. of Education | 1200 | (1) | 1100 | (1) | (1) | (1) | (1) |
| Dept. of HHS | 3800 | 400 | 1100 | 1400 | 200 | 700 | (1) |
| Dept. of HUD | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Justice | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Labor | 700 | (1) | (1) | 300 | 300 | (1) | (1) |
| Dept. of Transportation | 800 | 200 | 100 | 300 | 100 | 100 | (1) |
| EPA | 800 | 300 | 100 | 100 | 100 | 300 | (1) |
| NASA | 1500 | 800 | (1) | 600 | (1) | 100 | (1) |
| NSF | 1900 | 100 | 1500 | (1) | (1) | 200 | 100 |
| NRC | 400 | 300 | (1) | (1) | (1) | 100 | (1) |
| Other agency | 700 | (1) | 200 | 300 | 100 | 100 | (1) |
| Agency unknown | 500 | 100 | 400 | (1) | (1) | (1) | (1) |
| No Federal support | 47000 | 18400 | 26500 | 400 | 700 | 800 | (1) |
| Support not known | 6300 | 900 | 4500 | 300 | (1) | 100 | 600 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Computer specialists | 299000 | 237100 | 16800 | 20800 | 10700 | 10800 | 2800 |
| AID | 200 | 100 | (1) | (1) | (1) | 100 | (1) |
| Dept. of Agriculture | 1500 | 300 | 100 | 900 | 200 | (1) | (1) |
| Dept. of Commerce | 2100 | 700 | (1) | 1200 | 100 | 100 | (1) |
| Dept. of Defense | 34800 | 22500 | 800 | 8800 | 200 | 2300 | (1) |
| Dept. of Energy | 4500 | 2100 | 300 | 1100 | 200 | 800 | 100 |
| Dept. of Education | 1300 | 400 | 500 | (1) | 100 | 200 | (1) |
| Dept. of HHS | 4600 | 900 | 600 | 1500 | 1300 | 300 | (1) |
| Dept. of HUD | 700 | 300 | (1) | (1) | 200 | 100 | (1) |
| Dept. of Interior | 1300 | 500 | (1) | 800 | (1) | (1) | (1) |
| Dept. of Justice | 500 | 100 | (1) | 300 | 100 | (1) | (1) |
| Dept. of Labor | 1200 | 300 | (1) | 100 | 700 | 100 | (1) |
| Dept. of Transportation | 2800 | 1300 | (1) | 800 | 600 | 100 | (1) |
| EPA | 1100 | 500 | 100 | 300 | 200 | (1) | (1) |
| NASA | 6300 | 4800 | 500 | 900 | (1) | 200 | (1) |
| NSF | 1100 | 100 | 800 | (1) | (1) | 200 | (1) |
| NRC | 1000 | 600 | (1) | 200 | (1) | 100 | (1) |
| Other agency | 3700 | 800 | 100 | 2300 | 100 | 400 | (1) |
| Agency unknown | 2600 | 900 | 700 | 200 | 400 | 400 | (1) |
| No Federal support | 181100 | 161000 | 8900 | 900 | 4600 | 5200 | 500 |
| Support not known | 20800 | 12400 | 2800 | 900 | 1700 | 1000 | 2000 |
| Environmental scientists | 87200 | 54200 | 10800 | 14900 | 4200 | 2100 | 1000 |
| AID | 100 | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 2000 | 200 | 100 | 1700 | (1) | (1) | (1) |
| Dept. of Commerce | 4500 | 300 | 600 | 3400 | (1) | 300 | (1) |
| Dept. of Defense | 5000 | 800 | 800 | 2600 | (1) | 800 | (1) |
| Dept. of Energy | 3600 | 1100 | 1100 | 600 | 500 | 200 | (1) |
| Dept. of Education | 100 | (1) | 100 | (1) | (1) | (1) | (1) |
| Dept. of HHS | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HUD | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 6500 | 400 | 500 | 4900 | 500 | 100 | (1) |
| Dept. of Justice | 200 | 100 | (1) | (1) | 100 | (1) | (1) |
| Dept. of Labor | 100 | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Transportation | 500 | 200 | (1) | (1) | 200 | (1) | (1) |
| EPA | 1900 | 500 | 200 | 400 | 800 | (1) | (1) |
| NASA | 2100 | 500 | 800 | 700 | (1) | 100 | (1) |
| NSF | 3200 | 100 | 2400 | 200 | (1) | 300 | 100 |
| NRC | 800 | 200 | 200 | 300 | 100 | (1) | (1) |
| Other agency | 700 | 100 | 100 | 500 | (1) | (1) | (1) |
| Agency unknown | 400 | 100 | (1) | 100 | 200 | 100 | (1) |
| No Federal support | 49500 | 42400 | 4600 | 200 | 1800 | 200 | 200 |
| Support not known | 4100 | 1700 | 1200 | 300 | 200 | 100 | 600 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|----------------|-----------------------|--------------------|---------------|-------------------|--------------|-------------|
| Life scientists | 337 100 | 110300 | 109800 | 57 100 | 33400 | 23200 | 3200 |
| AID | 1600 | (1) | 1200 | 200 | 100 | 100 | (1) |
| Dept. of Agriculture | 55500 | 1800 | 16700 | 30100 | 6200 | 500 | 200 |
| Dept. of Commerce | 4800 | 200 | 900 | 2000 | 1600 | 100 | (1) |
| Dept. of Defense | 7300 | 1400 | 900 | 4200 | 100 | 600 | 100 |
| Dept. of Energy | 4900 | 1400 | 1400 | 900 | 500 | 600 | 100 |
| Dept. of Education | 2800 | 200 | 2200 | 100 | 100 | 200 | (1) |
| Dept. of HHS | 37400 | 1500 | 23900 | 5100 | 1200 | 5600 | 100 |
| Dept. of HUD | 300 | 100 | (1) | 100 | (1) | (1) | (1) |
| Dept. of Interior | 18800 | 1100 | 2000 | 9600 | 5700 | 300 | 100 |
| Dept. of Justice | 300 | 100 | (1) | 200 | (1) | (1) | (1) |
| Dept. of Labor | 400 | 100 | (1) | 200 | (1) | (1) | (1) |
| Dept. of Transportation | 1000 | 400 | 200 | 100 | 100 | 300 | (1) |
| EPA | 8600 | 1500 | 1400 | 2900 | 2400 | 600 | (1) |
| NASA | 1200 | 300 | 400 | 300 | 100 | 200 | (1) |
| NSF | 10000 | 200 | 8200 | 400 | 100 | 1200 | (1) |
| NRC | 400 | (1) | 300 | 100 | (1) | (1) | (1) |
| Other agency | 5600 | 500 | 1500 | 1200 | 800 | 1500 | 200 |
| Agency unknown | 4800 | 500 | 2700 | (1) | 1000 | 600 | (1) |
| No Federal support | 134900 | 72400 | 41900 | 800 | 11200 | 8000 | 700 |
| Support not known | 19400 | 4300 | 8100 | 800 | 3200 | 1200 | 1700 |
| Psychologists | 138400 | 45300 | 52200 | 3300 | 8100 | 27300 | 2300 |
| AID | 100 | (1) | (1) | (1) | 100 | (1) | (1) |
| Dept. of Agriculture | 400 | 100 | (1) | (1) | (1) | 300 | (1) |
| Dept. of Commerce | 300 | 100 | (1) | 100 | (1) | (1) | (1) |
| Dept. of Defense | 4100 | 1700 | 400 | 1000 | (1) | 1100 | (1) |
| Dept. of Energy | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Education | 10800 | 600 | 8700 | (1) | 500 | 900 | (1) |
| Dept. of HHS | 16800 | 1100 | 5200 | 900 | 1900 | 7700 | 100 |
| Dept. of HUD | 200 | 100 | (1) | (1) | (1) | 100 | (1) |
| Dept. of Interior | 400 | 100 | 200 | (1) | (1) | 100 | (1) |
| Dept. of Justice | 700 | 100 | 100 | (1) | 100 | 300 | (1) |
| Dept. of Labor | 900 | 200 | (1) | (1) | 200 | 400 | (1) |
| Dept. of Transportation | 700 | 300 | (1) | 200 | 100 | 100 | (1) |
| EPA | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NASA | 500 | 200 | 200 | 100 | (1) | (1) | (1) |
| NSF | 1500 | 100 | 1200 | (1) | (1) | 100 | 100 |
| NRC | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Other agency | 2900 | 300 | 300 | 800 | (1) | 1500 | (1) |
| Agency unknown | 2200 | 300 | 700 | 100 | 500 | 600 | 100 |
| No Federal support | 69400 | 26300 | 28800 | (1) | 3600 | 10300 | 400 |
| Support not known | 13100 | 1500 | 5800 | (1) | 700 | 3900 | 1300 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|----------------|-----------------------|--------------------|---------------|-------------------|--------------|--------------|
| Social scientists | 237200 | 103200 | 65700 | 22100 | 18700 | 24700 | 2900 |
| AID | 1400 | 100 | 400 | 500 | (1) | 500 | (1) |
| Dept. of Agriculture | 6400 | 1000 | 2900 | 2800 | 200 | 300 | (1) |
| Dept. of Commerce | 2800 | 400 | 200 | 1700 | 400 | 100 | (1) |
| Dept. of Defense | 7200 | 3000 | 600 | 2100 | 200 | 1200 | (1) |
| Dept. of Energy | 2700 | 900 | 100 | 1200 | 200 | 200 | (1) |
| Dept. of Education | 5200 | 400 | 3100 | 100 | 500 | 1100 | (1) |
| Dept. of HHS | 13500 | 700 | 3400 | 1700 | 3200 | 4200 | 300 |
| Dept. of HUD | 2200 | 400 | 100 | 400 | 1200 | 200 | (1) |
| Dept. of Interior | 2700 | 500 | 200 | 1000 | 700 | 200 | (1) |
| Dept. of Justice | 3100 | 500 | 700 | 700 | 800 | 400 | (1) |
| Dept. of Labor | 5100 | 600 | 500 | 2400 | 1300 | 300 | (1) |
| Dept. of Transportation | 2400 | 800 | 200 | 500 | 700 | 100 | 100 |
| EPA | 1700 | 800 | 200 | 300 | 300 | 100 | (1) |
| NASA | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| NSF | 2500 | 100 | 2100 | 100 | (1) | 200 | (1) |
| NRC | 200 | (1) | (1) | 100 | 100 | 100 | (1) |
| Other agency | 6900 | 500 | 1100 | 3400 | 400 | 1300 | (1) |
| Agency unknown | 4100 | 200 | 1600 | 500 | 900 | 800 | (1) |
| No Federal support | 113400 | 52900 | 42900 | 11300 | 4200 | 11800 | 600 |
| Support not known | 16100 | 2800 | 5700 | 1100 | 3000 | 1700 | 1800 |
| Total engineers | 1847200 | 1474200 | 50700 | 131600 | 85400 | 42600 | 62800 |
| AID | 1900 | 1800 | (1) | 100 | (1) | 100 | (1) |
| Dept. of Agriculture | 12700 | 5100 | 1200 | 5600 | 500 | 400 | (1) |
| Dept. of Commerce | 6100 | 3200 | 700 | 1400 | 300 | 500 | (1) |
| Dept. of Defense | 327500 | 226900 | 5700 | 75500 | 900 | 17900 | 600 |
| Dept. of Energy | 66400 | 46300 | 4400 | 8300 | 1300 | 5800 | 300 |
| Dept. of Education | 5200 | 1300 | 3200 | 300 | 200 | 100 | (1) |
| Dept. of HHS | 7700 | 3200 | 1700 | 800 | 500 | 1400 | 300 |
| Dept. of HUD | 12900 | 9100 | (1) | 600 | 3100 | 100 | (1) |
| Dept. of Interior | 10600 | 3500 | 400 | 4800 | 1500 | 500 | (1) |
| Dept. of Justice | 1100 | 700 | 100 | 300 | (1) | (1) | (1) |
| Dept. of Labor | 1500 | 500 | (1) | 600 | 400 | (1) | (1) |
| Dept. of Transportation | 62700 | 24400 | 500 | 7000 | 29200 | 500 | 100 |
| EPA | 37500 | 22200 | 800 | 3900 | 9900 | 700 | (1) |
| NASA | 64600 | 46400 | 3200 | 12100 | 200 | 2500 | 100 |
| NSF | 6700 | 1800 | 4100 | 100 | 100 | 500 | (1) |
| NRC | 8100 | 5700 | 300 | 1000 | 100 | 800 | 100 |
| Other agency | 11700 | 5000 | 400 | 4600 | 900 | 700 | (1) |
| Agency unknown | 8100 | 5200 | 500 | 900 | 1000 | 500 | 100 |
| No Federal support | 1044800 | 973300 | 22200 | 4600 | 29500 | 11200 | 4000 |
| Support not known | 167600 | 91800 | 5000 | 3200 | 8400 | 2100 | 57000 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------------|---------------|-----------------------|--------------------|---------------|-------------------|-------------|-------------|
| Aeronautical/astronautical | 80800 | 59800 | 2300 | 13300 | 400 | 2700 | 2400 |
| AID | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 200 | 100 | 100 | (1) | (1) | (1) | (1) |
| Dept. of Commerce | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 41500 | 32200 | 500 | 6600 | 100 | 2100 | 100 |
| Dept. of Energy | 1800 | 1300 | 200 | 200 | (1) | 100 | (1) |
| Dept. of Education | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of HHS | 100 | (1) | 100 | (1) | (1) | (1) | (1) |
| Dept. of HUD | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Justice | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Transportation | 1400 | 200 | (1) | 1000 | 100 | 100 | (1) |
| EPA | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NASA | 18300 | 11800 | 700 | 5200 | 100 | 500 | 100 |
| NSF | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| NRC | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other agency | 400 | 400 | (1) | 100 | (1) | (1) | (1) |
| Agency unknown | 400 | 400 | (1) | (1) | (1) | (1) | (1) |
| No Federal support | 17200 | 16200 | 700 | 100 | 200 | 100 | (1) |
| Support not known | 6400 | 3500 | 300 | 300 | (1) | 100 | 2200 |
| Chemical | 107700 | 97200 | 2900 | 2900 | 800 | 1600 | 2300 |
| AID | 200 | 100 | (1) | (1) | (1) | 100 | (1) |
| Dept. of Agriculture | 200 | 100 | 100 | (1) | (1) | (1) | (1) |
| Dept. of Commerce | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 4600 | 2400 | 100 | 1600 | (1) | 400 | (1) |
| Dept. of Energy | 6200 | 4400 | 600 | 500 | 100 | 500 | 100 |
| Dept. of Education | 300 | (1) | 300 | 100 | (1) | (1) | (1) |
| Dept. of HHS | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of HUD | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 500 | 200 | (1) | 200 | (1) | (1) | (1) |
| Dept. of Justice | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Transportation | 200 | 100 | (1) | (1) | (1) | (1) | (1) |
| EPA | 1200 | 400 | (1) | 400 | 200 | 100 | (1) |
| NASA | 700 | 500 | 100 | (1) | (1) | (1) | (1) |
| NSF | 600 | 200 | 400 | (1) | (1) | (1) | (1) |
| NRC | 400 | 200 | (1) | (1) | (1) | 200 | (1) |
| Other agency | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Agency unknown | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| No Federal support | 79400 | 76900 | 1400 | 100 | 200 | 600 | 200 |
| Support not known | 6300 | 3900 | 200 | (1) | 200 | (1) | 2100 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Civil | 258200 | 157200 | 5700 | 24300 | 57100 | 5300 | 8500 |
| AID | 400 | 400 | (1) | 100 | (1) | (1) | (1) |
| Dept. of Agriculture | 5200 | 1800 | 100 | 2900 | 400 | (1) | (1) |
| Dept. of Commerce | 1000 | 400 | (1) | 100 | 200 | 200 | (1) |
| Dept. of Defense | 23800 | 9900 | 300 | 11600 | 200 | 1900 | (1) |
| Dept. of Energy | 5200 | 3900 | 100 | 900 | 100 | 200 | 100 |
| Dept. of Education | 600 | 100 | 200 | 100 | 200 | (1) | (1) |
| Dept. of HHS | 1800 | 1300 | (1) | 100 | 200 | 200 | (1) |
| Dept. of HUD | 8300 | 5300 | (1) | 500 | 2400 | (1) | (1) |
| Dept. of Interior | 4300 | 1300 | 200 | 2300 | 500 | (1) | (1) |
| Dept. of Justice | 200 | 100 | 100 | (1) | (1) | (1) | (1) |
| Dept. of Labor | 300 | 100 | (1) | 100 | 100 | (1) | (1) |
| Dept. of Transportation | 42400 | 13700 | 200 | 2600 | 25300 | 600 | (1) |
| EPA | 14200 | 10100 | 200 | 600 | 3300 | 100 | (1) |
| NASA | 1500 | 1200 | 100 | 200 | (1) | (1) | (1) |
| NSF | 900 | 300 | 500 | (1) | 100 | (1) | (1) |
| NRC | 700 | 400 | 100 | (1) | (1) | (1) | (1) |
| Other agency | 2800 | 900 | (1) | 1300 | 600 | 100 | (1) |
| Agency unknown | 2100 | 1100 | (1) | 200 | 600 | (1) | 100 |
| No Federal support | 126200 | 100700 | 3300 | 700 | 19500 | 1400 | 600 |
| Support not known | 23900 | 10100 | 500 | 400 | 4900 | 300 | 7700 |
| Electrical/electronics | 437700 | 354000 | 13300 | 38900 | 4700 | 12200 | 14500 |
| AID | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 1600 | 1100 | (1) | 200 | (1) | 300 | (1) |
| Dept. of Commerce | 2100 | 900 | 100 | 1000 | (1) | 100 | (1) |
| Dept. of Defense | 112000 | 77200 | 2100 | 25600 | 100 | 6600 | 200 |
| Dept. of Energy | 12500 | 7800 | 500 | 2600 | 300 | 1300 | 100 |
| Dept. of Education | 900 | 200 | 600 | 100 | (1) | (1) | (1) |
| Dept. of HHS | 1900 | 400 | 800 | 200 | (1) | 400 | 100 |
| Dept. of HUD | 900 | 100 | (1) | 100 | 100 | (1) | (1) |
| Dept. of Interior | 800 | 400 | (1) | 200 | (1) | 100 | (1) |
| Dept. of Justice | 500 | 300 | (1) | 200 | (1) | 100 | (1) |
| Dept. of Labor | 400 | 300 | (1) | 100 | (1) | (1) | (1) |
| Dept. of Transportation | 6300 | 3300 | 100 | 2000 | 600 | 300 | (1) |
| EPA | 1800 | 1000 | 100 | 300 | 200 | 200 | (1) |
| NASA | 17400 | 11000 | 1500 | 3500 | (1) | 1300 | (1) |
| NSF | 2000 | 400 | 1300 | (1) | (1) | 300 | (1) |
| NRC | 1200 | 900 | (1) | 200 | 100 | 100 | (1) |
| Other agency | 2900 | 1300 | (1) | 1200 | 200 | 200 | (1) |
| Agency unknown | 2100 | 1500 | 100 | 200 | 100 | 200 | (1) |
| No Federal support | 233800 | 219800 | 5800 | 2000 | 2600 | 2900 | 800 |
| Support not known | 39000 | 21900 | 1600 | 1100 | 700 | 400 | 13300 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|---------------|-----------------------|--------------------|---------------|-------------------|-------------|-------------|
| Industrial | 113100 | 100200 | 1900 | 4400 | 1100 | 1700 | 3900 |
| AID | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Commerce | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 14600 | 10600 | 400 | 3300 | 100 | (1) | (1) |
| Dept. of Energy | 1200 | 900 | 100 | 100 | (1) | 100 | (1) |
| Dept. of Education | 100 | (1) | 100 | (1) | (1) | (1) | (1) |
| Dept. of HHS | 500 | 200 | (1) | (1) | (1) | 100 | (1) |
| Dept. of HUD | 100 | 100 | (1) | (1) | (1) | 200 | (1) |
| Dept. of Interior | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Justice | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | 100 | (1) | (1) | (1) | 100 | (1) | (1) |
| Dept. of Transportation | 600 | 600 | (1) | 100 | (1) | (1) | (1) |
| EPA | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| NASA | 2000 | 2000 | (1) | (1) | (1) | (1) | (1) |
| NSF | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NRC | 200 | 200 | (1) | (1) | (1) | (1) | (1) |
| Other agency | 200 | 100 | (1) | 100 | (1) | 100 | 100 |
| Agency unknown | 400 | 100 | (1) | 100 | (1) | 100 | (1) |
| No Federal support | 78700 | 75900 | 1000 | 200 | 500 | 800 | 300 |
| Support not known | 11700 | 7600 | (1) | 200 | 200 | 200 | 3400 |
| Materials | 39200 | 33400 | 2300 | 2000 | 200 | 600 | 700 |
| AID | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Commerce | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 7400 | 5400 | 600 | 1200 | (1) | (1) | (1) |
| Dept. of Energy | 3200 | 1700 | 700 | 500 | 100 | 100 | 100 |
| Dept. of Education | (1) | (1) | (1) | (1) | (1) | 200 | (1) |
| Dept. of HHS | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HUD | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 200 | 100 | (1) | 100 | (1) | (1) | (1) |
| Dept. of Justice | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Transportation | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| EPA | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| NASA | 2100 | 1900 | 100 | 200 | (1) | (1) | (1) |
| NSF | 700 | (1) | 600 | (1) | (1) | 100 | (1) |
| NRC | 200 | 100 | (1) | 100 | (1) | (1) | (1) |
| Other agency | 400 | 100 | 200 | 200 | (1) | (1) | (1) |
| Agency unknown | 200 | 100 | (1) | (1) | (1) | (1) | (1) |
| No Federal support | 22800 | 22200 | 500 | (1) | 100 | (1) | (1) |
| Support not known | 2900 | 1800 | 200 | (1) | 100 | 100 | 700 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Mechanical | 357900 | 310500 | 10100 | 18100 | 3200 | 6000 | 9900 |
| AID | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 700 | 400 | (1) | 200 | (1) | 100 | (1) |
| Dept. of Commerce | 1000 | 700 | 100 | 100 | (1) | 100 | (1) |
| Dept. of Defense | 52700 | 37100 | 900 | 12200 | 200 | 2100 | 100 |
| Dept. of Energy | 15800 | 11700 | 900 | 1100 | 300 | 1700 | 100 |
| Dept. of Education | 1800 | 500 | 1200 | 100 | (1) | (1) | (1) |
| Dept. of HHS | 1500 | 700 | 400 | 300 | (1) | (1) | (1) |
| Dept. of HUD | 800 | 800 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 900 | 300 | (1) | 300 | 100 | 100 | (1) |
| Dept. of Justice | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Transportation | 3100 | 2500 | 100 | 300 | 200 | (1) | (1) |
| EPA | 2400 | 1700 | 100 | 200 | 400 | (1) | (1) |
| NASA | 11900 | 9300 | 600 | 1700 | (1) | 400 | (1) |
| NSF | 1000 | 300 | 700 | (1) | (1) | (1) | (1) |
| NRC | 1800 | 1500 | 100 | 100 | (1) | (1) | (1) |
| Other agency | 1500 | 700 | (1) | 600 | (1) | 200 | (1) |
| Agency unknown | 1100 | 700 | 100 | 200 | (1) | 100 | (1) |
| No Federal support | 228600 | 219100 | 5300 | 600 | 1200 | 1600 | 800 |
| Support not known | 30800 | 19300 | 900 | 700 | 800 | 400 | 8800 |
| Mining | 14200 | 12100 | 600 | 600 | 400 | 200 | 260 |
| AID | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Commerce | 100 | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 300 | 100 | 100 | 100 | (1) | (1) | (1) |
| Dept. of Energy | 300 | 300 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Education | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HHS | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of HUD | 200 | 100 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 500 | 100 | (1) | 300 | (1) | 100 | (1) |
| Dept. of Justice | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Transportation | 400 | 200 | (1) | (1) | 200 | (1) | (1) |
| EPA | 100 | (1) | (1) | (1) | (1) | 100 | (1) |
| NASA | 100 | 100 | (1) | (1) | (1) | (1) | (1) |
| NSF | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NRC | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other agency | 100 | (1) | (1) | (1) | (1) | (1) | (1) |
| Agency unknown | (1) | (1) | (1) | 100 | (1) | (1) | (1) |
| No Federal support | 9900 | 9300 | 300 | (1) | (1) | (1) | (1) |
| Support not known | 800 | 600 | (1) | (1) | (1) | (1) | 100 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|-------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Nuclear | 18200 | 12200 | 500 | 3300 | 200 | 1400 | 700 |
| AID | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Commerce | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 3400 | 1300 | (1) | 1400 | (1) | 700 | (1) |
| Dept. of Energy | 5200 | 3300 | 300 | 1000 | (1) | 600 | (1) |
| Dept. of Education | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HHS | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HUD | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 100 | (1) | (1) | (1) | 100 | (1) | (1) |
| Dept. of Justice | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Dept. of Labor | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Transportation | 200 | (1) | (1) | 200 | (1) | (1) | (1) |
| EPA | 200 | 100 | (1) | 100 | (1) | (1) | (1) |
| NASA | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NSF | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NRC | 2300 | 1500 | 100 | 600 | (1) | 100 | (1) |
| Other agency | 200 | 100 | (1) | 100 | (1) | (1) | (1) |
| Agency unknown | 100 | (1) | (1) | (1) | (1) | (1) | (1) |
| No Federal support | 7200 | 6700 | 100 | 200 | (1) | 200 | (1) |
| Support not known | 1200 | 500 | (1) | 100 | (1) | (1) | 700 |
| Petroleum | 27700 | 24400 | 200 | 800 | 300 | 400 | 1600 |
| AID | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Commerce | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Defense | 300 | (1) | (1) | 100 | (1) | 100 | (1) |
| Dept. of Energy | 700 | 200 | 100 | 300 | (1) | (1) | (1) |
| Dept. of Education | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HHS | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of HUD | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Interior | 300 | (1) | (1) | 300 | (1) | (1) | (1) |
| Dept. of Justice | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Labor | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Dept. of Transportation | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| EPA | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NASA | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NSF | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| NRC | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| Other agency | 100 | (1) | (1) | 100 | (1) | (1) | (1) |
| Agency unknown | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| No Federal support | 19900 | 19200 | 100 | (1) | 300 | 200 | 100 |
| Support not known | 2500 | 1000 | (1) | (1) | (1) | (1) | 1400 |

See footnotes at end of table.

Table B-8. Scientists and engineers by field, Federal support status and type of employer: 1982-Continued

| Field and agency of support | Total | Business and industry | Educational insts. | Federal gov't | State/local gov't | Other | No report |
|-----------------------------|--------|-----------------------|--------------------|---------------|-------------------|-------|-----------|
| Other engineers | 392500 | 313100 | 10800 | 22900 | 17000 | 10600 | 18100 |
| AID | 630 | 600 | (1) | (1) | (1) | (1) | (1) |
| Dept. of Agriculture | 4600 | 1500 | 900 | 2100 | 100 | (1) | (1) |
| Dept. of Commerce | 1800 | 1100 | 400 | 200 | (1) | 100 | (1) |
| Dept. of Defense | 66900 | 50500 | 600 | 11900 | 300 | 3500 | 100 |
| Dept. of Energy | 14400 | 10900 | 1000 | 1000 | 400 | 1000 | (1) |
| Dept. of Education | 1500 | 400 | 900 | (1) | (1) | 100 | (1) |
| Dept. of HHS | 1700 | 500 | 400 | 200 | 100 | 500 | (1) |
| Dept. of HUD | 2500 | 2000 | (1) | (1) | 600 | (1) | (1) |
| Dept. of Interior | 3000 | 1000 | 200 | 900 | 700 | 100 | (1) |
| Dept. of Justice | 200 | 100 | (1) | 100 | (1) | (1) | (1) |
| Dept. of Labor | 400 | 100 | (1) | 200 | 100 | (1) | (1) |
| Dept. of Transportation | 7900 | 3700 | (1) | 700 | 2900 | 500 | 100 |
| EPRI | 17200 | 8500 | 400 | 2300 | 5800 | 200 | (1) |
| NASA | 10500 | 8600 | 300 | 1300 | (1) | 300 | (1) |
| NSF | 1400 | 600 | 600 | 100 | (1) | 100 | (1) |
| NRC | 1100 | 800 | (1) | 100 | (1) | 300 | (1) |
| Other agency | 3000 | 1500 | 200 | 1000 | 100 | 200 | (1) |
| Agency unknown | 1700 | 1100 | 100 | 100 | 200 | 100 | (1) |
| No Federal support | 221000 | 207300 | 3700 | 800 | 4800 | 3300 | 1100 |
| Support not known | 42100 | 21700 | 1300 | 400 | 1600 | 500 | 16700 |

(1) Too few cases to estimate.

NOTE: Detail may not add to total because of rounding.
SOURCE: National Science Foundation.

reproduction of survey questionnaires

| | page |
|------------------------------------------------------------------------------|------|
| 1982 National Survey of Natural and Social Scientists and Engineers | 49 |
| 1981 Survey of Doctorate Recipients | 58 |
| 1982 Survey of Science and Engineering Graduates | 62 |

NOTICE - Your report to the Census Bureau is confidential by law (title 13, U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

FORM **SSE-20**
(2 22 82)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

1982 NATIONAL SURVEY OF NATURAL AND SOCIAL SCIENTISTS AND ENGINEERS

**PLEASE
COMPLETE
AND
RETURN TO**

Bureau of the Census
ATTN: Current Projects Branch
1201 East Tenth Street
Jeffersonville, Indiana 47132

Please read instructions carefully before answering questions. Answer as accurately as you can by printing your reply clearly or by entering an "X" in the box next to the appropriate reply. If the instructions for a question direct you to enter a code or a description from a list, please refer to the Reference List Guide that is enclosed.

001 1

IF YOU HAVE MOVED, or if there are errors in the address label above, please enter the correct information about your name and current residence below.

Name

Number and street

City or town

County

002

State or foreign country

003

ZIP code

FROM THE DIRECTOR BUREAU OF THE CENSUS

One of our Nation's most valued resources is the highly trained and educated personnel in scientific, engineering, and other fields. Such individuals have provided much of the creativity and initiative that have contributed to United States development. It is essential that industry, academe, and government have current information about this valuable resource in order to plan for its effective development and use.

The National Science Foundation, the government agency responsible for the collection and dissemination of information concerning the Nation's science and engineering personnel, has asked the Bureau of the Census to conduct a survey of persons from a variety of occupations who have attained certain levels of education. The purpose of this survey is to obtain information about their education and training, employment and career development, and the relationship of their training to subsequent occupation. This information can be utilized in planning and analysis by private industry, industrial and trade associations, federal and state government agencies, and colleges and universities. For this survey to yield representative results, it is important that each person contacted in the survey complete and return this questionnaire.

Beginning on page 2, please answer the questions and return your questionnaire in the enclosed addressed envelope. For some questions, you are asked to enter a code and description from Reference List A, B, or C. This Reference List Guide is enclosed.

This information is being collected under the authority of the National Science Foundation Act of 1950, as amended (42 USC 1862). The information you provide is confidential and may be seen only by sworn Census Bureau employees. The information may be used only for statistical purposes and cannot be given to any other government agency, private concern, or individual. These data will be released only in the form of statistical summaries which will preclude the identification of any survey participant. Your response is entirely voluntary, and your failure to provide some or all of the requested information will in no way adversely affect you.

The National Science Foundation and the Census Bureau appreciate your cooperation.

Sincerely,


BRUCE CHAPMAN

Enclosures

Part I - SOME FACTS ABOUT YOURSELF

1. Sex **101** 1 Male
2 Female

2. Are you -- **102** 1 American Indian or Alaskan Native
2 Asian or Pacific Islander
3 Black
4 White
5 Other - Specify _____

3. Are you of Spanish/Hispanic origin or descent? **103** 2 No
1 Yes
104 1 Mexican-American
2 Puerto Rican
3 Other Hispanic

4. In what month and year were you born? **105** [] [] Month (Enter two-digit month code in boxes, e.g. "01" for January, etc.)
106 [] [] [] [] Year

5. As of May 9, 1982, what was your marital status? **107** 1 Married
2 Widowed
3 Separated
4 Divorced
5 Never married

6. Did you have any children living with you as of May 9, 1982, who were --
a. 6-17 years of age? **108** 1 Yes
2 No
b. Under 6 years of age? **109** 1 Yes
2 No

7a. Are you a U.S. citizen? **110** 1 Yes - SKIP to 8a
2 No, non-U.S. citizen, immigrant (permanent resident)
3 No, non-U.S. citizen, non-immigrant (temporary resident) } GO to b

b. If non-U.S. citizen, of which country are you a citizen? **111** [] Specify country _____

8a. Are you physically handicapped? **112** 1 Yes - GO to b
2 No - SKIP to 9

b. What is the nature of your handicap(s)? **113** 1 Visual
* 2 Auditory
3 Ambulatory
4 Other - Specify _____
Mark (X) all that apply.

Part II - EDUCATION AND TRAINING

9. How many years of formal education have you COMPLETED beyond high school? **114** _____ Years - GO to 10
0 None - SKIP to 12a

10. Beginning with the most recent and working back, list each institution beyond the high school level from which you have obtained or are obtaining formal training leading to an academic degree. Designate degrees by abbreviations, for example, AA, BS, BA, MS, Ph.D., LLB, MD, etc. Use a separate line for each degree granted or worked for, or for any change in major field of specialized study. Refer to List A on the enclosed Reference List Guide for the code numbers of major fields. Do NOT include correspondence courses, on-the-job training, apprenticeship, or training at an employer's training school; training of these types should be reported in question 12a. If you need more space, attach a separate sheet of paper and give the same type of information for each additional school.

| College, university, or other post high school institution Name, city, and State or foreign country | Type of degree worked for, if any (AA, BS, etc.), or none | Year degree awarded | Major field Enter code and description from Reference List A | |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------|-----------------------------------------------------------------|-------------|
| | | | Code | Description |
| MOST RECENT | 118 | 117 | 118 | |
| | OR | OR | | |
| | 0 <input type="checkbox"/> None | 0 <input type="checkbox"/> None | | |
| SECCND-TO-LAST | 120 | 121 | 122 | |
| | OR | OR | | |
| | 0 <input type="checkbox"/> None | 0 <input type="checkbox"/> None | | |
| THIRD-TO-LAST | 124 | 125 | 126 | |
| | OR | OR | | |
| | 0 <input type="checkbox"/> None | 0 <input type="checkbox"/> None | | |
| FOURTH-TO-LAST | 128 | 129 | 130 | |
| | OR | OR | | |
| | 0 <input type="checkbox"/> None | 0 <input type="checkbox"/> None | | |
| | 127 | | | |

Part IV — EMPLOYMENT PROFILE — Continued

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|--------------------------------------------------------------------------|--|--|--------------------------|--|--|---------------------|--|--|------------------|--|--|--------------------------------|--|--|---------------|--|--|------|
| <p>19. What kind of business was this? Enter code and description from Reference List B. If the organization conducted its activities at different locations, enter the description of the activity at the location where you were employed.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">146</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> | 146 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | |
| 146 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>20. What kind of work were you doing? Enter the code and description of your occupation from Reference List C.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">147</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List C</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> | 147 | Code | Description from Reference List C | | | | | | | | | | | | | | | | | | | | | | | | |
| 147 | Code | Description from Reference List C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>21a. Which category best describes the type of organization of your principal employment? Mark (X) only one box.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">148</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td> <input type="checkbox"/> 01 Self-employed <input type="checkbox"/> 02 Business or industry <input type="checkbox"/> 03 Junior college, 2-year college, technical institute <input type="checkbox"/> 04 Medical school <input type="checkbox"/> 05 4-year college or university, other than medical school <input type="checkbox"/> 06 Elementary or secondary school system <input type="checkbox"/> 07 Hospital or clinic <input type="checkbox"/> 08 Non-profit organization, other than hospital, clinic, or educational institution <input type="checkbox"/> 09 U.S. military service, active duty, or Commissioned Corps, e.g., USPHS, NOAA <input type="checkbox"/> 10 U.S. Government, civilian employee <input type="checkbox"/> 11 State government <input type="checkbox"/> 12 Local or other government — Specify _____ <input type="checkbox"/> 13 International agency <input type="checkbox"/> 14 Other — Specify _____ </td> </tr> </table> | 148 | Code | Description from Reference List B | | | <input type="checkbox"/> 01 Self-employed <input type="checkbox"/> 02 Business or industry <input type="checkbox"/> 03 Junior college, 2-year college, technical institute <input type="checkbox"/> 04 Medical school <input type="checkbox"/> 05 4-year college or university, other than medical school <input type="checkbox"/> 06 Elementary or secondary school system <input type="checkbox"/> 07 Hospital or clinic <input type="checkbox"/> 08 Non-profit organization, other than hospital, clinic, or educational institution <input type="checkbox"/> 09 U.S. military service, active duty, or Commissioned Corps, e.g., USPHS, NOAA <input type="checkbox"/> 10 U.S. Government, civilian employee <input type="checkbox"/> 11 State government <input type="checkbox"/> 12 Local or other government — Specify _____ <input type="checkbox"/> 13 International agency <input type="checkbox"/> 14 Other — Specify _____ | | | | | | | | | | | | | | | | | | | | | |
| 148 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="checkbox"/> 01 Self-employed <input type="checkbox"/> 02 Business or industry <input type="checkbox"/> 03 Junior college, 2-year college, technical institute <input type="checkbox"/> 04 Medical school <input type="checkbox"/> 05 4-year college or university, other than medical school <input type="checkbox"/> 06 Elementary or secondary school system <input type="checkbox"/> 07 Hospital or clinic <input type="checkbox"/> 08 Non-profit organization, other than hospital, clinic, or educational institution <input type="checkbox"/> 09 U.S. military service, active duty, or Commissioned Corps, e.g., USPHS, NOAA <input type="checkbox"/> 10 U.S. Government, civilian employee <input type="checkbox"/> 11 State government <input type="checkbox"/> 12 Local or other government — Specify _____ <input type="checkbox"/> 13 International agency <input type="checkbox"/> 14 Other — Specify _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>b. If you had more than one job during the week of May 9, 1982, enter the category code from above that is most appropriate for your SECOND job. Enter the appropriate code (01 — 14) from item 21a above.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">150</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td> <input type="checkbox"/> Second job <input type="checkbox"/> Did not have a second job the week of May 9, 1982 </td> </tr> </table> | 150 | Code | Description from Reference List B | | | <input type="checkbox"/> Second job <input type="checkbox"/> Did not have a second job the week of May 9, 1982 | | | | | | | | | | | | | | | | | | | | | |
| 150 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="checkbox"/> Second job <input type="checkbox"/> Did not have a second job the week of May 9, 1982 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>22. From the activities listed below, select your primary and secondary work activities for your principal job as reported in item 18, in terms of time devoted for a typical week. Enter the appropriate code (01 — 16) for each in the specified box.</p> <p>PLEASE NOTE: Basic research is study directed toward gaining scientific knowledge primarily for its own sake. Applied research is study directed toward gaining scientific knowledge in an effort to meet a recognized need. Development is direction of the knowledge gained from research toward production of useful materials, devices, systems, and methods.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">151</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td>Primary work activity</td> </tr> <tr> <td style="text-align: center;">152</td> <td style="text-align: center;">Code</td> <td>Secondary work activity</td> </tr> </table> | 151 | Code | Description from Reference List B | | | Primary work activity | 152 | Code | Secondary work activity | | | | | | | | | | | | | | | | | | |
| 151 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Primary work activity | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 152 | Code | Secondary work activity | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Code</p> <p>01 — Management or administration of research and development 02 — Management or administration of other than research and development 03 — Teaching and training — preparing and teaching courses, guiding and counseling students or trainees 04 — Basic research 05 — Applied research 06 — Development — product, process, and technical development 07 — Report and technical writing, editing, information retrieval 08 — Clinical diagnosis</p> | <p>Code</p> <p>09 — Design of equipment, processes, models 10 — Quality control, testing, evaluation, or inspection 11 — Operations — production, maintenance, construction, installation 12 — Distribution — sales, traffic, purchasing, customer and public relations 13 — Statistical work — survey work, forecasting, statistical analysis 14 — Consulting 15 — Computer applications 16 — Other activities — Specify _____</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>23. During a typical week in your principal job reported in item 18, what percent of working time did you devote to each of the following activities? Entries should total 100%.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">153</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td>_____ % Management or administration</td> </tr> <tr> <td></td> <td></td> <td>_____ % Basic research</td> </tr> <tr> <td></td> <td></td> <td>_____ % Applied research</td> </tr> <tr> <td></td> <td></td> <td>_____ % Development</td> </tr> <tr> <td></td> <td></td> <td>_____ % Teaching</td> </tr> <tr> <td></td> <td></td> <td>_____ % Operations, production</td> </tr> <tr> <td></td> <td></td> <td>_____ % Other</td> </tr> <tr> <td></td> <td></td> <td>100%</td> </tr> </table> | 153 | Code | Description from Reference List B | | | _____ % Management or administration | | | _____ % Basic research | | | _____ % Applied research | | | _____ % Development | | | _____ % Teaching | | | _____ % Operations, production | | | _____ % Other | | | 100% |
| 153 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Management or administration | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Basic research | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Applied research | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Development | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Teaching | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Operations, production | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _____ % Other | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 100% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>24a. For your principal job reported in item 18, what basic annual salary do you CURRENTLY earn? Exclude bonuses, overtime, summer teaching, or other payments for secondary jobs.</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">160</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td>\$ _____ 00 Per year — GO to b</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Not currently employed at that job — SKIP to 25</td> </tr> </table> | 160 | Code | Description from Reference List B | | | \$ _____ 00 Per year — GO to b | | | <input type="checkbox"/> Not currently employed at that job — SKIP to 25 | | | | | | | | | | | | | | | | | | |
| 160 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | \$ _____ 00 Per year — GO to b | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="checkbox"/> Not currently employed at that job — SKIP to 25 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>b. If academically employed in your principal job, mark whether your salary is for —</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">163</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> 1 9 — 10 months</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> 2 11 — 12 months</td> </tr> </table> | 163 | Code | Description from Reference List B | | | <input type="checkbox"/> 1 9 — 10 months | | | <input type="checkbox"/> 2 11 — 12 months | | | | | | | | | | | | | | | | | | |
| 163 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="checkbox"/> 1 9 — 10 months | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="checkbox"/> 2 11 — 12 months | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>25. What was your total professional income in 1981 including basic annual salary, bonuses, overtime, summer teaching, consulting fees, etc.?</p> | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">164</td> <td style="width:15%; text-align: center;">Code</td> <td style="width:75%;">Description from Reference List B</td> </tr> <tr> <td></td> <td></td> <td>\$ _____ 00 In 1981</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> None</td> </tr> </table> | 164 | Code | Description from Reference List B | | | \$ _____ 00 In 1981 | | | <input type="checkbox"/> None | | | | | | | | | | | | | | | | | | |
| 164 | Code | Description from Reference List B | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | \$ _____ 00 In 1981 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <input type="checkbox"/> None | | | | | | | | | | | | | | | | | | | | | | | | | | |

Part IV -- EMPLOYMENT PROFILE -- Continued

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>26. What was your basic annual salary in 1981 for the principal job you held longest, excluding bonuses, overtime, summer teaching, consulting fees, etc.?</p> | <p>165 \$ _____</p> <p>0 <input type="checkbox"/> None</p> |
| <p>27a. During the week of May 9, 1982, was any of your work at your principal job supported by U.S. Government funds?</p> | <p>166 1 <input type="checkbox"/> Yes -- GO to b 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know } SKIP to 28</p> |
| <p>b. Which of these agencies or departments were supporting your work? Mark (X) all that apply.</p> | <p>167 *</p> <p>1 <input type="checkbox"/> AID (Agency for International Development) 2 <input type="checkbox"/> Department of Agriculture 3 <input type="checkbox"/> Department of Commerce 4 <input type="checkbox"/> Department of Defense 5 <input type="checkbox"/> Department of Energy 6 <input type="checkbox"/> Department of Education (NIE, OE, NCES) 7 <input type="checkbox"/> Department of Health and Human Services (Old HEW) 8 <input type="checkbox"/> Department of Housing and Urban Development 9 <input type="checkbox"/> Department of the Interior 10 <input type="checkbox"/> Department of Justice 11 <input type="checkbox"/> Department of Labor 12 <input type="checkbox"/> Department of Transportation 13 <input type="checkbox"/> EPA (Environmental Protection Agency) 14 <input type="checkbox"/> NASA (National Aeronautics and Space Administration) 15 <input type="checkbox"/> NSF (National Science Foundation) 16 <input type="checkbox"/> Nuclear Regulatory Commission 17 <input type="checkbox"/> Other -- Specify _____ 18 <input type="checkbox"/> Don't know source agency</p> |
| <p>28. From this list of selected areas of national interest, indicate the ONE area to which you devote(d) the MOST professional time during a typical week at the job reported in item 18.</p> | <p>168 1 <input type="checkbox"/> Energy and fuel -- GO to 29a 2 <input type="checkbox"/> Health 3 <input type="checkbox"/> Environment 4 <input type="checkbox"/> Education 4 <input type="checkbox"/> Teaching 6 <input type="checkbox"/> Other education 5 <input type="checkbox"/> National defense 6 <input type="checkbox"/> Crime prevention and control 7 <input type="checkbox"/> Food production and technology 8 <input type="checkbox"/> Other mineral resources 9 <input type="checkbox"/> Community development and service 10 <input type="checkbox"/> Housing (planning, design, construction) 11 <input type="checkbox"/> None of the above</p> <p style="text-align: right;">} SKIP to 30</p> |
| <p>29a. Please mark your best estimate of the percent of your professional time that you devote(d) to energy and fuel during a typical week.</p> | <p>169 1 <input type="checkbox"/> 100 percent 2 <input type="checkbox"/> 75 to 99 percent 3 <input type="checkbox"/> 50 to 74 percent 4 <input type="checkbox"/> 25 to 49 percent 5 <input type="checkbox"/> 24 percent or less</p> |
| <p>b. From this list, mark the ONE energy source that involves(d) the LARGEST proportion of your energy-related work during a typical week.</p> | <p>170 1 <input type="checkbox"/> Coal and coal products 2 <input type="checkbox"/> Petroleum (including oil shale and tar sands) or natural gas 3 <input type="checkbox"/> Fission 4 <input type="checkbox"/> Fusion 5 <input type="checkbox"/> Hydroenergy 6 <input type="checkbox"/> Direct solar (including space and water heating, thermal, electric) 7 <input type="checkbox"/> Indirect solar (winds, tides, biomass, etc.) 8 <input type="checkbox"/> Geothermal 9 <input type="checkbox"/> Other -- Specify _____</p> |
| <p>c. Please read this list of energy-related activities and mark the item(s) that best describe the activity(ies) in which you are (were) engaged during a typical week. Mark (X) all that apply.</p> | <p>171 *</p> <p>01 <input type="checkbox"/> Exploration 02 <input type="checkbox"/> Extraction (gas, oil, mining) 03 <input type="checkbox"/> Manufacture of energy-related components or products 04 <input type="checkbox"/> Fuel processing (including refining and enriching) 05 <input type="checkbox"/> Electric power generation 06 <input type="checkbox"/> Transportation, transmission, distribution of fuel or energy 07 <input type="checkbox"/> Energy storage 08 <input type="checkbox"/> Energy utilization, management 09 <input type="checkbox"/> Fuel reprocessing or disposal 10 <input type="checkbox"/> Energy conservation 11 <input type="checkbox"/> Environmental impact (health, economic, etc.) 12 <input type="checkbox"/> Education, training 13 <input type="checkbox"/> Other -- Specify _____</p> |
| <p>d. Please enter the number of the activity from the above list (29c) that best describes the activity in which you spend(t) MOST of your energy-related time. Enter the appropriate code number (01 to 13) from item 29c above.</p> | <p>172 <input style="width: 20px; height: 15px;" type="text"/> Activity</p> |



Part V – OTHER INFORMATION

| <p>30. During calendar year 1981, how many weeks –</p> <p>(a) Did you work? (Include weeks of paid vacation, paid sick leave, and military service.) 173 _____ Weeks</p> <p>(b) Were you without a job, but seeking work; or on layoff from a job? 174 _____ Weeks</p> <p>(c) Were you not working, not seeking work, and not on layoff from a job? 175 _____ Weeks</p> <p align="center"><i>(Entries should total 52 weeks.)</i></p> | <p align="center">52 Weeks</p> | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------|---------|-------|---------|-------|
| <p>31. How many years of professional work experience, including teaching, have you had?</p> <p>176 _____ Years</p> <p><input type="checkbox"/> None</p> | | | | | | | |
| <p>32. Since age 22, have you had any periods of at least one year's duration when you were neither employed, nor looking for work, nor attending school full time? (Do NOT include time in the Armed Forces.)</p> <p>177 <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes – How many years?</p> <p>178 _____ Total years</p> | | | | | | | |
| <p>33. Complete the following statement: Based on my total education and experience, I regard myself professionally as – (an) –</p> <p>179 _____</p> <p align="center"><i>Enter code and description from Reference List C.</i></p> | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Code</th> <th>Description from Reference List C</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">[] []</td> <td>_____</td> </tr> <tr> <td style="text-align: center;">[] []</td> <td>_____</td> </tr> </tbody> </table> | Code | Description from Reference List C | [] [] | _____ | [] [] | _____ |
| Code | Description from Reference List C | | | | | | |
| [] [] | _____ | | | | | | |
| [] [] | _____ | | | | | | |
| <p>34. Are you currently a member of a national professional society or association?</p> <p>180 <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes – Specify organization(s) _____</p> <p>181 [] [] (1) _____</p> <p>182 [] [] (2) _____</p> <p>183 [] [] (3) _____</p> | | | | | | | |
| <p>35. Are you currently professionally licensed, certified, or registered? For example: teaching certificate, medical license, professional society certification, etc.</p> <p>184 <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes – Give title(s) _____</p> <p>185 [] [] (1) _____</p> <p>186 [] [] (2) _____</p> | | | | | | | |
| <p>36a. Was the position you held on May 9, 1976, different from your present position? (Consider a change of position to have occurred if you changed employers, if you remained with the same employer but changed your occupation, or if you remained with the same employer but had a significant change in duties or level of responsibility.)</p> <p>187 <input type="checkbox"/> Yes – GO to b</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Not working the week of May 9, 1976</p> <p><input type="checkbox"/> Not currently working</p> | <p align="right">} SKIP to 37a</p> | | | | | | |
| <p>b. How was it different?</p> <p align="center"><i>Mark (X) all that apply.</i></p> <p>188 <input type="checkbox"/> Different employer</p> <p><input type="checkbox"/> Different occupation</p> <p><input type="checkbox"/> Different duties or responsibilities</p> <p><input type="checkbox"/> Other – Specify change _____</p> | | | | | | | |
| <p>37a. In the event it is necessary to contact you to clarify some of the information you provided, may we contact you by telephone?</p> <p><input type="checkbox"/> Yes – GO to b</p> <p><input type="checkbox"/> No – SKIP to 38</p> | | | | | | | |
| <p>b. Enter the telephone number on which you can be reached.</p> <p>189 _____</p> <p align="center">Area code Number</p> | | | | | | | |
| <p>c. If there is an alternate number on which you can be reached, enter it also.</p> <p>190 _____</p> <p align="center">Area code Number</p> | | | | | | | |
| <p>38. Please enter the name of a person, other than yourself and at an address other than yours, through whom you can be reached.</p> <p>191 Name _____</p> <p>Relationship to you _____</p> <p>Number and street _____</p> <p>City or town _____</p> <p>State or foreign country ZIP code</p> | | | | | | | |
| <p>39. Please print your full name</p> <p>_____</p> | <p>40. Date prepared</p> <p>_____</p> | | | | | | |



REFERENCE LIST B — KINDS OF BUSINESSES

This list is to be used in answering question 19 about the kind of business or industry for which you worked. Please scan the entire list, choose the appropriate answer for the question and enter the code and description from this list. If none of the categories listed below adequately describes the kind of business for which you worked, use the "Other" category (code 434).

| Code | Description |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturing | |
| 401 | Aircraft, aircraft engines, aircraft parts |
| 402 | Chemicals and allied products |
| 403 | Electrical machinery, equipment and supplies for the generation, storage, transformation, transmission and utilization of electrical energy |
| 404 | Electronic computers and computing equipment, and accounting, calculating and office machinery and equipment |
| 405 | Fabricated metal products (except ordnance, machinery, and transportation equipment) |
| 406 | Machinery (except electrical) including engines and turbines, farming and construction machinery, mining, metalworking and other manufacturing and service industry machines |
| 407 | Motor vehicles and motor vehicle equipment, including trucks, buses, automobiles, railroad locomotives, railroad cars, railroad equipment |
| 408 | Ordnance, including manufacture of arms, ammunition, tanks, and complete guided missiles, space vehicles, and parts |
| 409 | Petroleum and coal products, including petroleum refining |
| 410 | Primary metal industries, including smelting, refining, rolling, drawing, alloying, and manufacture of castings, forgings, and other basic metal products |
| 411 | Professional, scientific, and photographic equipment and supplies |
| 412 | Radio, television, and communication equipment and parts |
| 413 | Other manufacturing, including printing and publishing |
| Educational Institutions | |
| 414 | College or university (offering at least a Bachelor's degree) |
| 415 | Junior college or technical institute |
| 416 | Medical school |
| 417 | Other educational institutions |
| Health Services | |
| 418 | Hospital or clinic |
| 419 | Other medical and health services |
| Other Kinds of Business | |
| 420 | Agriculture, forestry, and fisheries |
| 421 | Business, repair, and personal services |
| 422 | Construction |
| 423 | Engineering, architectural, or surveying services |
| 424 | Museums, art galleries, and zoos |
| 425 | Private, non-profit organizations other than educational institutions and hospitals |
| 426 | Professional and technical societies |
| 427 | Research institutions |
| 428 | Other professional services, excluding health and education |
| 429 | Finance, insurance, or real estate |
| 430 | Mining and petroleum extraction |
| 431 | Retail and wholesale trade |
| 432 | Transportation, communication, or other public utilities |
| 433 | U.S. Postal Service |
| 434 | Other (Describe briefly in the applicable item on questionnaire) |
| Public Administration, excluding U.S. Postal Service (see code 433) (Include only uniquely governmental activities, such as U.S. Park Service, U.S. Air Force, State court, Department of Motor Vehicles, city building inspection, or city public welfare. For example, if you work for the U.S. Park Service, use code 436; on the other hand, if you work at a Veteran's Administration Hospital, use code 418, Hospital or clinic; if you work at a State university, use code 414, College or university; if you work for a county road building agency, use code 422, Construction; if you work in a Defense Department research laboratory, use code 427, Research institutions.) | |
| 435 | Uniformed military service |
| 436 | Federal public administration |
| 437 | State public administration |
| 438 | Local public administration |
| 439 | Regional government |
| 440 | Other government (e.g., United Nations) |

REFERENCE LIST C – OCCUPATIONS

This list is to be used in answering questions 20 and 33 about your occupational and professional classification. Please scan the entire list, choose the appropriate entry and enter the code and description from this list. If you cannot find exactly the right entry, please choose the one that comes nearest to it. If none of the entries is at all appropriate, use the "Other" category (code 788) and enter a brief description in the space provided on the questionnaire. Note that codes 701 – 744 include college professors and instructors.

| Code | Description | Code | Description |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Engineers, including college professors and instructors | | Health Occupations, including persons who are primarily practitioners. Persons engaged primarily in medical research, teaching, and similar activities use code 738. Medical scientist. |
| 701 | Engineer, aeronautical, aerospace, or astronautical | 745 | Dental hygienist |
| 702 | Engineer, agricultural | 746 | Medical technician |
| 703 | Engineer, chemical | 747 | Physician or surgeon |
| 704 | Engineer, civil or architectural | 748 | Other health occupations, e.g., dentist, pharmacist, practical and registered nurse, etc. (Describe briefly in the applicable item on questionnaire.) |
| 705 | Engineer, electrical or electronic | | |
| 706 | Engineer, environmental or sanitary | | Technicians and technologists, except medical and health |
| 707 | Engineer, industrial | 749 | Designer, electronic parts |
| 708 | Engineer, marine engineer or naval architect | 750 | Designer, industrial |
| 709 | Engineer, mechanical | 751 | Designer, machine tools |
| 710 | Engineer, metallurgical or materials | 752 | Designer, other |
| 711 | Engineer, mining or geological | 753 | Drafting occupations, including draftsman |
| 712 | Engineer, nuclear | 754 | Technician, architectural |
| 713 | Engineer, petroleum | 755 | Technician, biological and agricultural |
| 714 | Engineer, sales | 756 | Technician, construction and highway |
| 715 | Engineer, systems | 757 | Technician, electrical and electronic |
| 716 | Engineer, other fields (Describe briefly in the applicable item on questionnaire.) | 758 | Technician, industrial engineering |
| | | 759 | Technician, mechanical engineering |
| | Computer Specialists, including college professors and instructors | 760 | Technician, other engineering |
| 717 | Computer programmer | 761 | Technician, surveying and mapping (Surveyors, see code 787) |
| 718 | Computer scientist | 762 | Technician, other science |
| 719 | Computer systems analyst | 763 | Technician, other fields (Describe briefly in the applicable item on questionnaire.) |
| 720 | Other computer specialists (Describe briefly in the applicable item on questionnaire.) | | |
| | | | Teachers |
| | Mathematicians, Statisticians and other Mathematical Scientists, including college professors and instructors | 764 | Teacher, elementary school |
| 721 | Actuary, including actuarial mathematician | 765 | Teacher, secondary school |
| 722 | Mathematician | 766 | Teacher, college and university teacher of non-engineering and non-science subjects (Engineering and science teachers, see codes 701 – 744.) |
| 723 | Operations research analyst | | |
| 724 | Statistician | | Administrators, Managers, and Officials, excluding farm |
| 725 | Systems analyst, except computer systems or data processing (see code 719) | 767 | Administrator or manager, production and operations |
| 726 | Other mathematical scientists (Describe briefly in the applicable item on questionnaire.) | 768 | Administrator or manager, scientific and technical research and development |
| | | 769 | Administrator, manager, or official, all others, excluding self-employed |
| | Physical Scientists, including college professors and instructors | 770 | College president or dean |
| 727 | Atmospheric scientist, meteorologist, space scientist | 771 | Self-employed proprietor |
| 728 | Chemist, except biochemist | 772 | Urban and regional planners |
| 729 | Earth scientist, including geologist, geophysicist, geodesist, etc. | | |
| 730 | Oceanographer | | All other occupations |
| 731 | Physicist, astronomer | 773 | Accountant, except financial analyst |
| 732 | Other physical scientists, e.g., geographer, environmental scientist, materials scientist, etc. (Describe briefly in the applicable item on questionnaire.) | 774 | Administrative support occupations, including clerical work (such as bookkeeper, secretary, etc.) |
| | | 775 | Clergy |
| | Biological Scientists, including college professors and instructors | 776 | Farmer (owner, manager, tenant, or farm laborer) |
| 733 | Agricultural scientist, food scientist, fishery biologist | 777 | Financial analyst |
| 734 | Biochemist | 778 | Firefighter or police |
| 735 | Biological scientist, life scientist, botanist, ecologist | 779 | Laborer, except farm |
| 736 | Biophysicist | 780 | Lawyer or judge |
| 737 | Forestry or conservation scientist, including forester, and conservationists | 781 | Librarian |
| 738 | Medical scientist, excluding persons who are primarily medical practitioners (see Health Occupations) | 782 | Merchant or shopkeeper, self-employed |
| 739 | Other biological scientists (Describe briefly in the applicable item on questionnaire.) | 783 | Operator or fabricator (such as assembler, welder, truck driver, etc.) |
| | | 784 | Postal worker |
| | Social Scientists, including college professors and instructors | 785 | Precision production, craft, and repair occupations (such as carpenter, electrician, mechanic, repair worker, etc.) |
| 740 | Anthropologist | 786 | Sales occupations, excluding sales engineer |
| 741 | Economist, including market research analysts | 787 | Surveyor |
| 742 | Psychologist | 788 | Other occupations, not specified above (Describe briefly in the applicable item on questionnaire.) |
| 743 | Sociologist | | |
| 744 | Other social scientists, e.g., demographer, historian, political scientist, etc. (Describe briefly in the applicable item on questionnaire.) | | |

1981 SURVEY OF DOCTORATE RECIPIENTS

OMB No. 3145-0020

CONDUCTED BY THE NATIONAL RESEARCH COUNCIL WITH THE SUPPORT OF THE NATIONAL SCIENCE FOUNDATION, THE NATIONAL ENDOWMENT FOR THE HUMANITIES, THE NATIONAL INSTITUTES OF HEALTH, AND THE DEPARTMENT OF ENERGY

NOTE: THIS INFORMATION IS SOLICITED UNDER THE AUTHORITY OF THE NATIONAL SCIENCE FOUNDATION ACT OF 1950, AS AMENDED. ALL INFORMATION YOU PROVIDE WILL BE TREATED AS CONFIDENTIAL, WILL BE SAFEGUARDED IN ACCORDANCE WITH THE PROVISIONS OF THE PRIVACY ACT OF 1974, AND WILL BE USED FOR STATISTICAL PURPOSES ONLY. INFORMATION WILL BE RELEASED ONLY IN THE FORM OF STATISTICAL SUMMARIES OR IN A FORM WHICH DOES NOT IDENTIFY INFORMATION ABOUT ANY PARTICULAR PERSON. YOUR RESPONSE IS ENTIRELY VOLUNTARY AND YOUR FAILURE TO PROVIDE SOME OR ALL OF THE REQUESTED INFORMATION WILL IN NO WAY ADVERSELY AFFECT YOU.

If your name and address are incorrect, please enter correct information below.

INCLUDE NEW NINE-DIGIT ZIP CODE IF KNOWN

If there is an alternate address through which you can always be reached, please provide it on the line below. (10)

| c/o | Number | Street | City | State | ZIP Code | (11) |
|-----|--------|--------|------|-------|----------|------|
| | | | | | | |

- 1a. How many full-time equivalent years of professional work experience have you had? _____ Year(s) (12-13)
- b. Since receiving the doctorate, how many full-time equivalent years of professional work experience have you had? _____ Year(s) (14-15)
- c. Since receiving the doctorate, how many full-time equivalent years of work experience, if any, involved teaching? _____ Year(s) (16-17)

2. What was your employment status (includes postdoctoral appointment*) during FEBRUARY 1981? Circle your selection and enter number from below (18)

1. Employed full-time (Skip to Question #4)
2. Employed part-time
If you were employed part-time, were you seeking full-time employment? Yes No (19)

3. Postdoctoral appointment*
If you held a postdoctoral appointment, was it full-time (Skip to Question #4) part-time (20)

4. Unemployed and seeking employment
 5. Not employed and not seeking employment
 6. Retired and not employed
 7. Other, specify _____
- } (Skip to Question #20)

* Temporary appointment in academia, industry or government, the primary purpose of which is to provide for continued education or experience in research.

3. If you were employed part-time during FEBRUARY 1981, what was the MOST important reason for being in that position? Enter number from below (21)

1. Part-time employment preferred
2. Full-time position not available
3. Constraints due to family or marital status
4. Other, specify _____

4. From the Degree and Employment Specialties List on page 4 select and enter both the number and title of the employment specialty most closely related to your principal employment or postdoctoral appointment during FEBRUARY 1981. Write in your specialty if it is not on the list.

| Number | Title of Employment Specialty | (22-24) |
|--------|-------------------------------|---------|
| | | |

5. If you were employed during FEBRUARY 1981 in a specialty field other than your field of Ph.D., what was the MOST important reason for being in that position? Enter number from below (25)

1. Better pay
2. More attractive career options
3. Preferred specific geographic location
4. Constraints due to family or marital status
5. Position in Ph.D. field not available
6. Promoted out of position in Ph.D. field
7. Other, specify _____

6. Please give the name of your principal employer (company, organization, postdoctoral institution, etc. or, if self employed, write "self") and actual place of employment during FEBRUARY 1981.

Name of Employer _____ (26-31)

Number _____ Street _____

City _____ State _____

ZIP Code _____ (32-40)

7. Which category below best describes the type of organization of your principal employment OR postdoctoral appointment during FEBRUARY 1981? Enter number from below (41-42)

- | | |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1. Business or industry (including self-employed) | 8. Hospital or clinic |
| 2. Junior college, 2-year college, technical institute | 9. U.S. military service, active duty, or Commissioned Corps, e.g., USPHS, NOAA |
| 3. Medical school (including university affiliated hospital or medical center) | 10. U.S. government, civilian employee |
| 4. 4-year college | 11. State government |
| 5. University, other than medical school | 12. Local or other government, specify: _____ |
| 6. Elementary or secondary school system | 13. Nonprofit organization, other than those listed above |
| 7. Private foundation | 14. Other, specify _____ |

8. What were your primary and secondary work activities during FEBRUARY 1981? (Enter number from the list provided below)

- | | | |
|------------------------------------------------------|----------------------------------------------|--------------------------------------------|
| 1. Teaching | <input type="checkbox"/> Primary (43-44) | <input type="checkbox"/> Secondary (45-46) |
| 2. Basic research | | |
| 3. Applied research | | |
| 4. Development of equipment, products, systems, data | | |
| 5. Design | 12. Consulting | |
| 6. Writing | 13. Production | |
| 7. Editing | 14. Cultural resources | |
| 8. Professional services to individuals | 15. Archival work | |
| Management or administration of: | 16. Curatorial work | |
| 9. Research and development | 17. Performing arts | |
| 10. Educational programs | 18. Quality control, inspection, testing | |
| 11. Other | 19. Sales, marketing, purchasing, estimating | |
| | 20. Other, specify _____ | |

9. What was the basic annual salary* associated with your principal professional employment during FEBRUARY 1981? If you were on a postdoctoral appointment (see question #2 for definition), what was your stipend plus allowances? \$ _____ per year (47-49)

Check whether salary was for 9-10 months or 11-12 months (50)

*Basic salary is your annual salary before deductions for income tax, social security, retirement, etc., but does not include bonuses, overtime, summer teaching, or other payment for professional work.

10a. What was your basic annual salary* for the year ending December 31, 1980? \$ _____ per year (51-53)

Check whether salary was for 9-10 months or 11-12 months (54)

b. What was your gross professional income† for the year 1980? \$ _____ per year (55-57)

†Gross professional income is all payments received for professional activities including basic salary before deductions plus bonuses, consulting fees, honoraria, royalties, rental and subsistence allowances, etc.

11. What percentage of your professional work time did you devote to each of the following activities during FEBRUARY 1981? (Total should equal 100%)

- | | |
|--------------------------------------------------------------------|-------------------------------------|
| 1. _____ (58) Management or administration of R&D | 7. _____ (70) Consulting |
| 2. _____ (60) Management or administration of educational programs | 8. _____ (72) Writing/editing |
| 3. _____ (62) Management or administration of other programs | 9. _____ (74) Development/design |
| 4. _____ (64) Teaching | 10. _____ (76) Cultural resources |
| 5. _____ (66) Applied research | 11. _____ (78) Other, specify _____ |
| 6. _____ (68) Basic research | |

12. If you were employed by an academic institution: during FEBRUARY 1981, did you hold a tenured position? 1 Yes 2 No (10)

If YES, what year was tenure granted? _____ (11-12)

If NO, did you hold a tenure-track position? 1 Yes 2 No (13)

13. If you were employed by an academic institution during FEBRUARY 1981, what was the rank of your position? Enter number from below (14)

- | | | | |
|------------------------|-------------------------|-------------------------|-------|
| Faculty | | Non-Faculty | |
| 1. Professor | 4. Instructor | 7. Teaching staff | |
| 2. Associate professor | 5. Administrator | 8. Research staff | |
| 3. Assistant professor | 6. Other, specify _____ | 9. Other, specify _____ | |
| | Title | | Title |

14. Was any of your work during FEBRUARY 1981 supported or sponsored by U.S. Government funds?

1 Yes 2 No 3 Don't Know (15)

If YES, which federal agencies or departments were supporting the work?

Enter number(s) from the List of Federal Supporting Agencies on page 4. _____ (16-39)

15. How important was your DOCTORAL degree in enabling you to attain your present position? (Check only one)

- 1 Essential qualification
 2 Helpful, but not essential
 3 Unimportant
 4 Cannot ascertain (40)

16. Listed below are selected topics of national interest. If you devoted a proportion of your professional time which you considered significant to any of these problem areas during FEBRUARY 1981, please give the corresponding number of the ONE on which you spent the MOST time

Enter number from below (41-42)

- | | | |
|-------------------------------------------|-----------------------------------------------|----------------------------------------------|
| 1. Energy or fuel | 6. Space | 11. Housing (planning, design, construction) |
| 2. Health | 7. Crime prevention and control | 12. Transportation, communications |
| 3. Defense | 8. Food and other agricultural products | 13. Cultural life |
| 4. Environ. protection, pollution control | 9. Natural resources, other than fuel or food | 14. Other area, specify _____ |
| 5. Education (other than teaching) | 10. Community development and services | |

If you did not select energy or fuel (category #1) in question #16, please skip to question #20.

17. From the list below, give the corresponding number of the ONE energy source that involved the LARGEST proportion of your energy-related work during FEBRUARY 1981.

Enter number from below (43)

- | | |
|-----------------------------------------------------------------|------------------------------------------------------------------------|
| 1. Coal and coal products | 6. Direct solar (including space and water heating, thermal, electric) |
| 2. Petroleum (including oil shale and tar sands) or natural gas | 7. Indirect solar (winds, tides, biomass, etc.) |
| 3. Fission | 8. Geothermal |
| 4. Fusion | 9. Other, specify _____ |
| 5. Hydracenergy | |

18. Please read the following list of energy-related activities and give the corresponding number(s) from the list below of the activity(ies) in which you were engaged during FEBRUARY 1981. Enter number(s) from below _____ (44-63)

- | | |
|-----------------------------------------------------------------|---------------------------------------------------|
| 1. Exploration | 8. Energy utilization, management |
| 2. Extraction (gas, oil, mining) | 9. Fuel reprocessing or disposal |
| 3. Manufacture of energy-related components or products | 10. Energy conservation |
| 4. Fuel processing (including refining and enriching) | 11. Environmental impact (health, economic, etc.) |
| 5. Electric power generation | 12. Education, training |
| 6. Transportation, transmission, distribution of fuel or energy | 13. Research and development |
| 7. Energy storage | 14. Other, specify _____ |

19. Please enter the number 1-14 from question #18 that BEST describes the activity in which you spent MOST of your energy-related time. (64-65)

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20. What is the major field of your doctorate? Please use the Specialties List on page 4. Please provide the name of the institution where the degree was earned and the year the degree was granted. | |
| Ph.D. Field (66-68) | Month and Year Granted (69-71) Institution (72-77) |
| 21. Date of Birth Mo. Day Year ____ - ____ - ____ (10-14) | 22. Citizenship 1 <input type="checkbox"/> U.S. Native Born 3 <input type="checkbox"/> Non-U.S., Immigrant (Perm. Res.) 2 <input type="checkbox"/> U.S. Naturalized 4 <input type="checkbox"/> Non-U.S., Immigrant (Temp. Res.) (15) IF NON-U.S., specify country of citizenship _____ (16-17) |
| 23a. What is your marital status? 1 <input type="checkbox"/> Now Married 2 <input type="checkbox"/> Widowed 3 <input type="checkbox"/> Never Married 4 <input type="checkbox"/> Divorced, separated (18) | 23b. Do you have any children living with you who are: Under 6 years of age? 1 <input type="checkbox"/> Yes How many? _____ 2 <input type="checkbox"/> No (19-20) Between 6 and 18 years of age? 1 <input type="checkbox"/> Yes How many? _____ 2 <input type="checkbox"/> No (21-22) |
| 24. Are you physically handicapped? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (23) If Yes, enter number(s) from below _____ (24-27) 1. Visual 2. Auditory 3. Ambulatory 4. Other, specify _____ | |
| 25a. What is your racial background? 1 <input type="checkbox"/> American Indian or Alaskan Native 3 <input type="checkbox"/> Black 2 <input type="checkbox"/> Asian or Pacific Islander 4 <input type="checkbox"/> White (28) | 25b. Is your ethnic heritage Hispanic? 1 <input type="checkbox"/> Yes If Yes, is it: 2 <input type="checkbox"/> No (29) 1 <input type="checkbox"/> Mexican-American 3 <input type="checkbox"/> Other Hispanic (30) 2 <input type="checkbox"/> Puerto Rican |

Thank you for completing this questionnaire, Please return the completed form in the enclosed envelope to the Commission on Human Resources, JH638, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418.

DEGREE AND EMPLOYMENT SPECIALTIES LIST

MATHEMATICAL SCIENCES

- 000 - Algebra
- 010 - Analysis & Functional Analysis
- 020 - Geometry
- 030 - Logic
- 040 - Number Theory
- 052 - Probability
- 055 - Math Statistics (see also 544, 670, 725, 727)
- 060 - Topology
- 082 - Operations Research (see also 478)
- 085 - Applied Mathematics
- 089 - Combinatorics & Finite Mathematics
- 091 - Physical Mathematics
- 098 - Mathematics, General
- 099 - Mathematics, Other*

COMPUTER SCIENCES

- 071 - Theory
- 072 - Software Systems
- 073 - Hardware Systems
- 074 - Intelligent Systems
- 079 - Computer Sciences, Other (see also 437, 476)

PHYSICS & ASTRONOMY

- 101 - Astronomy
- 102 - Astrophysics
- 110 - Atomic & Molecular
- 120 - Electromagnetism
- 130 - Mechanics
- 132 - Acoustics
- 134 - Fluids
- 135 - Plasma
- 136 - Optics
- 138 - Thermal
- 140 - Elementary Particles
- 150 - Nuclear Structure
- 180 - Solid State
- 198 - Physics, General
- 199 - Physics, Other*

CHEMISTRY

- 200 - Analytical
- 210 - Inorganic
- 215 - Synthetic Inorganic & Organometallic
- 220 - Organic
- 225 - Synthetic Organic & Natural Products
- 230 - Nuclear
- 240 - Physical
- 245 - Quantum
- 250 - Theoretical
- 255 - Structural
- 260 - Agricultural & Food
- 265 - Thermodynamics & Material Properties
- 270 - Pharmaceutical
- 275 - Polymers
- 280 - Biochemistry (see also 540)
- 285 - Chemical Dynamics
- 298 - Chemistry, General
- 299 - Chemistry, Other*

EARTH, ENVIRONMENTAL AND MARINE SCIENCES

- 301 - Mineralogy, Petrology
- 305 - Geochemistry
- 310 - Stratigraphy, Sedimentation
- 320 - Paleontology
- 330 - Structural Geology
- 341 - Geophysics (Solid Earth)
- 350 - Geomorph. & Glacial Geology
- 391 - Applied Geol., Geol. Engr. & Econ. Geol.
- 395 - Fuel Tech. & Petrol. Engr. (see also 479)
- 360 - Hydrology & Water Resources
- 370 - Oceanography
- 397 - Marine Sciences, Other*
- 381 - Atmospheric Physics & Chemistry
- 382 - Atmospheric Dynamics
- 383 - Atmospheric Sciences, Other*
- 388 - Environmental Sciences, General (see also 480, 528)
- 369 - Environmental Sciences, Other*
- 398 - Earth Sciences, General
- 399 - Earth Sciences, Other*

ENGINEERING

- 400 - Aeronautical & Astronautical
- 410 - Agricultural
- 415 - Biomedical
- 420 - Civil
- 430 - Chemical
- 435 - Ceramic
- 437 - Computer
- 440 - Electrical
- 445 - Electronics
- 450 - Industrial & Manufacturing
- 455 - Nuclear
- 460 - Engineering Mechanics
- 465 - Engineering Physics
- 470 - Mechanical
- 475 - Metallurgy & Phys. Met. Engr.
- 478 - Systems Design & Systems Science (see also 072, 073, 074)
- 478 - Operations Research (see also 082)
- 479 - Fuel Technology & Petrol. Engr. (see also 395)
- 480 - Sanitary & Environmental
- 486 - Mining
- 497 - Materials Science
- 498 - Engineering, General
- 499 - Engineering, Other*

AGRICULTURAL SCIENCES

- 500 - Agronomy
- 501 - Agricultural Economics
- 502 - Animal Husbandry
- 503 - Food Science and/or Technology (see also 573)
- 504 - Fish & Wildlife
- 505 - Forestry
- 506 - Horticulture
- 507 - Soils & Soil Science
- 510 - Animal Science & Animal Nutrition
- 511 - Phytopathology
- 518 - Agriculture, General
- 519 - Agriculture, Other*

MEDICAL SCIENCES

- 520 - Medicine & Surgery
- 522 - Public Health & Epidemiology
- 523 - Veterinary Medicine
- 524 - Hospital Administration
- 526 - Nursing
- 527 - Parasitology
- 528 - Environmental Health
- 534 - Pathology
- 538 - Pharmacology
- 537 - Pharmacy
- 538 - Medical Sciences, General
- 539 - Medical Sciences, Other*

BIOLOGICAL SCIENCES

- 540 - Biochemistry (see also 280)
- 542 - Biophysics
- 543 - Biomathematics
- 544 - Biometrics and Biostatistics (see also 055, 670, 725, 727)
- 545 - Anatomy
- 546 - Cytology
- 547 - Embryology
- 548 - Immunology
- 550 - Botany
- 560 - Ecology
- 582 - Hydrobiology
- 564 - Microbiology & Bacteriology
- 566 - Physiology, Animal
- 567 - Physiology, Plant
- 569 - Zoology
- 570 - Genetics
- 571 - Entomology
- 572 - Molecular Biology
- 573 - Food Science and/or Technology (see also 503)
- 574 - Behavior/Ethology
- 576 - Nutrition & Dietetics
- 578 - Biological Sciences, General
- 579 - Biological Sciences, Other*

PSYCHOLOGY

- 600 - Clinical
- 610 - Counseling & Guidance
- 620 - Developmental & Gerontological
- 630 - Educational
- 635 - School Psychology
- 641 - Experimental
- 642 - Comparative
- 643 - Physiological
- 650 - Industrial & Personnel
- 660 - Personality
- 670 - Psychometrics (see also 055, 544, 725, 727)
- 680 - Social
- 698 - Psychology, General
- 699 - Psychology, Other*

SOCIAL SCIENCES

- 700 - Anthropology
- 703 - Archeology
- 708 - Communications*
- 709 - Linguistics
- 710 - Sociology
- 720 - Economics (see also 501)
- 725 - Econometrics (see also 055, 544, 670, 727)
- 727 - Social Statistics (see also 055, 544, 670, 725)
- 740 - Geography
- 745 - Area Studies*
- 751 - Political Science
- 752 - Public Administration
- 755 - International Relations
- 760 - Criminology & Criminal Justice
- 770 - Urban & Regional Planning
- 775 - History & Philosophy of Science
- 798 - Social Sciences, General
- 799 - Social Sciences, Other*

HUMANITIES

- 802 - History & Criticism of Art
- 804 - History, American
- 805 - History, European
- 806 - History, Other*
- 808 - American Studies
- 809 - Theater & Theater Criticism
- 830 - Music
- 831 - Speech as a Dramatic Art (see also 885)
- 834 - Philosophy
- 838 - Comparative Literature
- 891 - Library & Archival Science
- 878 - Humanities, General
- 879 - Humanities, Other*

LANGUAGES & LITERATURE

- 811 - American
- 812 - English
- 821 - German
- 822 - Russian
- 823 - French
- 824 - Spanish & Portuguese
- 826 - Italian
- 827 - Classical*
- 829 - Other Languages*

EDUCATION & OTHER PROFESSIONAL FIELDS

- 801 - Art, Applied
- 833 - Religion
- 881 - Theology
- 882 - Business Administration
- 883 - Home Economics
- 884 - Journalism
- 885 - Speech & Hearing Sciences (see also 831)
- 886 - Law, Jurisprudence
- 887 - Social Work
- 897 - Professional Field, Other*
- 938 - Education (other than teaching in a field listed above)
- 899 - Other Fields*

*Identify the specific field in the space on the questionnaire.

LIST OF FEDERAL SUPPORTING AGENCIES (For use with #14)

- | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> 1. Agency for International Development 2. Environmental Protection Agency 3. National Aeronautics & Space Administration 4. National Endowment for the Arts 5. National Endowment for the Humanities 6. National Science Foundation 7. Nuclear Regulatory Commission 8. Smithsonian Institution 9. Department of Agriculture | <ul style="list-style-type: none"> 10. Department of Commerce 11. Department of Defense 12. Department of Energy 13. National Institutes of Health (DHHS) 14. Alcohol, Drug Abuse & Mental Health Administration (NIAA, NIDA, NIMH) 15. Other DHHS, specify _____ 16. National Institute of Education (E.D.) 17. Other Department of Education (E.D.) | <ul style="list-style-type: none"> 18. Department of Housing and Urban Development 19. Department of the Interior 20. Department of Justice 21. Department of Labor 22. Department of State 23. Department of Transportation 24. Other agency or department, specify _____ 25. Don't know source agency |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

INSTITUTE FOR SURVEY RESEARCH
TEMPLE UNIVERSITY
-Of The Commonwealth System Of Higher Education-
PHILADELPHIA, PENNSYLVANIA 19122

STUDY #518-305-01
FALL/WINTER 1982

OMB No.: 3145-0032
Expires: December 1983

1982 SURVEY OF SCIENCE AND ENGINEERING GRADUATES

NATIONAL SCIENCE FOUNDATION
AND
U.S. DEPARTMENT OF ENERGY

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be treated as confidential and will be used for statistical purposes only. Information will be released only in the form of statistical summaries from which it will be impossible to identify any particular person. Your response is entirely voluntary and failure to provide some or all of the requested information will not in any way adversely affect you.

NAME: _____

ADDRESS: _____

TELEPHONE: () _____

DEGREE AND EMPLOYMENT SPECIALTY LIST

Agriculture

803 Agricultural economics
 013 Agronomy
 014 Animal, dairy, poultry, sciences
 015 Farm and range management
 016 Fish, game and wildlife management
 017 Food sciences
 018 Forestry and related sciences
 019 Horticulture
 020 Natural resources management
 021 Soil science
 090 Agricultural sciences, other

Biological Sciences

211 Anatomy, histology
 213 Biochemistry
 214 Biophysics
 215 Botany
 221 Cell and molecular biology
 216 Entomology
 226 Embryology
 217 Genetics
 218 Immunology
 219 Marine biology
 220 Microbiology, bacteriology
 227 Neurosciences
 222 Nutrition
 228 Parasitology
 223 Pathology, human, animal, plant
 224 Physiology, human, animal, plant
 229 Radiobiology
 230 Toxicology
 225 Zoology
 290 Biological sciences, other

Education

413 Biological sciences education
 414 Engineering education
 417 Mathematics education
 421 Physical sciences education
 425 Social science education
 490 Education, other

Engineering

511 Aerospace, aeronautical, astronautical
 512 Agricultural
 513 Architectural
 514 Bioengineering and biomedical engineering
 515 Chemical
 516 Civil, construction, and transportation
 723 Computer
 517 Electrical, electronic, and communication
 529 Engineering science
 519 Environmental and sanitary
 520 Geological
 521 Industrial
 530 Materials
 522 Mechanical
 523 Metallurgical
 524 Mining and mineral
 525 Naval architecture and marine
 526 Nuclear
 531 Ocean
 527 Petroleum
 751 Operations research/management sciences
 590 Engineering, other

Mathematical Sciences

711 Actuarial science
 723 Computer sciences
 750 Mathematics
 751 Operations research/management sciences
 713 Statistics
 723 Computer and information sciences
 780 Mathematics, other

Physical Sciences

720 Astronomy
 721 Atmospheric sciences and meteorology
 213 Biochemistry
 722 Chemistry
 741 Earth sciences and geology
 733 Metallurgy
 742 Oceanography
 731 Physics
 790 Physical sciences, other

Social Sciences

811 Anthropology
 812 Criminology
 813 Economics (except agricultural)
 814 Geography
 118 Linguistics
 817 Political science and government
 818 Psychology (except clinical)
 821 Sociology
 822 Urban studies
 890 Other social sciences

Health Sciences

611 Clinical psychology
 612 Dentistry
 614 Hospital and health care administration
 615 Medicine or pre-medicine
 616 Nursing
 617 Pharmacology
 618 Pharmacy
 690 Other health areas

Arts, Humanities and Other Specialties

910 Area and ethnic studies
 911 Architecture and environmental design
 110 Arts and letters, general
 310 Business and commerce
 115 English and journalism
 114 Fine and applied arts
 116 Foreign language and literature, all fields
 815 History
 912 Home economics, all fields
 913 Law and prelaw
 915 Military science, including merchant marine deck officer
 816 Philosophy
 819 Religion and theology
 820 Social work
 999 Other specialties

INSTRUCTIONS FOR COMPLETING THIS QUESTIONNAIRE

In constructing this questionnaire we have tried to provide response categories for most answers. If the response categories are not adequate for you to answer a question correctly, please write your answer in the question box. If you are not certain of the correct response, please give us your best estimate or guess.

There are basically two types of questions: the closed-end questions, where response categories have been provided and you are asked to mark a box; and open-end questions, where you are asked to fill in the information sought. In addition, in some of the questions you are asked to fill in "code numbers" either from the list on page 2 or from a preceding question.

An example of each type, with sample answers, is shown below.

1. Do you subscribe to any periodical journals or magazines?

1. Yes (GO TO QUESTION 2)
2. NO (SKIP TO QUESTION 4)

2. Which of the following journals or magazines do you receive?
(MARK AS MANY AS APPLY)

01. Newsweek
02. Time
03. Life
04. Science
05. Scientific American
06. Other, Specify: Smithsonian

3. Which of the journals marked in question 2 most relates to the kind of work you do? (ENTER THE APPROPRIATE CODE NUMBER FROM QUESTION 2)

0 4

4. What professional society or association do you belong to?

National Association of Mechanical Engineers

Please answer all the questions that apply to you and follow directions which may ask you to skip certain questions. In the absence of instructions, always go to the next question. Even if you feel only part of the questionnaire applies to you, or there are some questions you cannot answer, please return the entire questionnaire.

We appreciate your participation and thank you for completing this questionnaire.

PART I. DEMOGRAPHIC CHARACTERISTICS

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. In what month and year were you born? 1/8</p> <p style="text-align: center;">____ (MONTH) ____ (YEAR)</p> | <p>7. As of May 9, 1982, did you have any children living with you? 19</p> <p>1. <input type="checkbox"/> Yes → 2. <input type="checkbox"/> Under 6 years of age</p> <p>3. <input type="checkbox"/> 6-17 years of age</p> <p>4. <input type="checkbox"/> No</p> |
| <p>2. Are you: 12</p> <p>1. <input type="checkbox"/> Male 2. <input type="checkbox"/> Female</p> | |
| <p>3. Are you: 13</p> <p>1. <input type="checkbox"/> U.S. citizen (<i>GO TO QUESTION 4</i>)</p> <p>2. <input type="checkbox"/> Non-U.S. citizen, immigrant (permanent resident)</p> <p>3. <input type="checkbox"/> Non-U.S. citizen, nonimmigrant (temporary resident)</p> <p>3a. If non-U.S. citizen, of which country are you a citizen?</p> <p style="text-align: center;">_____ (COUNTRY)</p> | <p>8. Are you physically handicapped? 20</p> <p>1. <input type="checkbox"/> Yes (<i>GO TO QUESTION 9</i>)</p> <p>2. <input type="checkbox"/> No (<i>SKIP TO QUESTION 10</i>)</p> |
| <p>4. Are you: 16</p> <p>1. <input type="checkbox"/> American Indian or Alaskan Native</p> <p>2. <input type="checkbox"/> Asian or Pacific Islander</p> <p>3. <input type="checkbox"/> Black</p> <p>4. <input type="checkbox"/> White</p> <p>5. <input type="checkbox"/> Other, please specify: _____ →</p> | <p>9. What is the nature of your handicap(s)? 21 (MARK AS MANY AS APPLY)</p> <p>1. <input type="checkbox"/> Visual 2. <input type="checkbox"/> Ambulatory</p> <p>4. <input type="checkbox"/> Auditory 8. <input type="checkbox"/> Other, specify: _____ →</p> |
| <p>5. Are you of Spanish/Hispanic origin or descent? 17</p> <p>1. <input type="checkbox"/> Yes → 2. <input type="checkbox"/> Mexican-American</p> <p>3. <input type="checkbox"/> Puerto Rican</p> <p>4. <input type="checkbox"/> Other Hispanic</p> <p>5. <input type="checkbox"/> No</p> | <p>10. Are you a student, currently attending a college or university? 23</p> <p>1. <input type="checkbox"/> Yes → 2. <input type="checkbox"/> Student, full-time</p> <p>3. <input type="checkbox"/> Student, part-time</p> <p>4. <input type="checkbox"/> No</p> <p><i>In the next section (Question 11) beginning with the most recent and working back, list on the appropriate line each institution beyond the high school level from which you have obtained or are obtaining formal training leading to an academic degree.</i></p> <p><i>Designate degrees by abbreviations, for example, AA, BA, MA, MS, Ph.D., LLB, MD, etc. Use a separate line for each degree granted or worked for, or for any change in major field of specialized study. Refer to the list on page 2 for the code number and the description of major fields. Do NOT include correspondence courses, on-the-job training, apprenticeship, or training at an employer's training school.</i></p> |
| <p>6. As of May 9, 1982, were you: 18</p> <p>1. <input type="checkbox"/> Married 2. <input type="checkbox"/> Widowed</p> <p>3. <input type="checkbox"/> Separated 4. <input type="checkbox"/> Divorced</p> <p>5. <input type="checkbox"/> Never married</p> | <p><i>If you need more space, attach a separate sheet of paper and give the same type of information for each additional school listed.</i></p> |

PART II. EDUCATION AND TRAINING

| 11a. College, university or other post high school institution | b. Type of degree worked for, if any (BA, MA, etc.) | c. Year degree awarded | d. Major field (ENTER CODE AND DESCRIPTION FROM LIST ON PAGE 2) |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p><u>MOST RECENT:</u> 24</p> <p>_____ (NAME)</p> <p>_____ (CITY)</p> <p>_____ (STATE OR FOREIGN COUNTRY)</p> | <p>28</p> <p>_____ (DEGREE)</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>30</p> <p>19 _____</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>32</p> <p>_____ (CODE)</p> <p>_____ (DESCRIPTION)</p> |
| <p><u>SECOND TO LAST:</u> 35</p> <p>_____ (NAME)</p> <p>_____ (CITY)</p> <p>_____ (STATE OR FOREIGN COUNTRY)</p> | <p>39</p> <p>_____ (DEGREE)</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>41</p> <p>19 _____</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>43</p> <p>_____ (CODE)</p> <p>_____ (DESCRIPTION)</p> |
| <p><u>THIRD TO LAST:</u> 46</p> <p>_____ (NAME)</p> <p>_____ (CITY)</p> <p>_____ (STATE OR FOREIGN COUNTRY)</p> | <p>50</p> <p>_____ (DEGREE)</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>52</p> <p>19 _____</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>54</p> <p>_____ (CODE)</p> <p>_____ (DESCRIPTION)</p> |
| <p><u>FOURTH TO LAST:</u> 57</p> <p>_____ (NAME)</p> <p>_____ (CITY)</p> <p>_____ (STATE OR FOREIGN COUNTRY)</p> | <p>61</p> <p>_____ (DEGREE)</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>63</p> <p>19 _____</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>65</p> <p>_____ (CODE)</p> <p>_____ (DESCRIPTION)</p> |
| <p><u>FIFTH TO LAST:</u> 68</p> <p>_____ (NAME)</p> <p>_____ (CITY)</p> <p>_____ (STATE OR FOREIGN COUNTRY)</p> | <p>72</p> <p>_____ (DEGREE)</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>74</p> <p>19 _____</p> <p>OR</p> <p><input type="checkbox"/> None</p> | <p>76</p> <p>_____ (CODE)</p> <p>_____ (DESCRIPTION)</p> |

PART III. EMPLOYMENT STATUS

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p style="text-align: right;">2/8</p> <p>12. During the week of May 9, 1982, were you:</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Working full-time (35 hours or more at least in one position) (SKIP TO QUESTION 16) 2. <input type="checkbox"/> Working part-time (GO TO QUESTION 13) 3. <input type="checkbox"/> Not working, but seeking work (SKIP TO PART IV ON PAGE 7) 4. <input type="checkbox"/> Not working and not seeking work (SKIP TO QUESTION 14) | <p style="text-align: right;">13</p> <p>16. During the week of May 9, 1982, were you working at (or on layoff or temporarily absent from) a position related to the natural sciences, social sciences, or engineering?</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Yes (SKIP TO PART IV ON PAGE 7) 2. <input type="checkbox"/> No (GO TO QUESTION 17) |
| <p style="text-align: right;">3</p> <p>13. Were you seeking full-time work?</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No <p style="text-align: right;">(SKIP TO QUESTION 16)</p> | <p style="text-align: right;">14</p> <p>17. What was the most important reason for taking that position?</p> <p>(MARK ONLY ONE BOX)</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Preferred nonscience or nonengineering position 2. <input type="checkbox"/> Promoted out of science or engineering position 3. <input type="checkbox"/> Pay was better in nonscience or nonengineering position 4. <input type="checkbox"/> Locational preference 5. <input type="checkbox"/> Science or engineering position not available 6. <input type="checkbox"/> Other reason, please specify: ↘ <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> |
| <p style="text-align: right;">10</p> <p>14. Did you look for work at any time during the three weeks prior to the week of May 9, 1982; that is, between April 18 and May 8, 1982?</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No | |
| <p style="text-align: right;">11</p> <p>15. What was the main reason you were not working or not seeking work during the week of May 9, 1982?</p> <p>(MARK ONLY ONE BOX)</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> On layoff from a job 2. <input type="checkbox"/> On vacation or otherwise temporarily absent from a job for health or personal reasons 3. <input type="checkbox"/> Retired 4. <input type="checkbox"/> Student 5. <input type="checkbox"/> Family responsibilities 6. <input type="checkbox"/> Chronic illness or permanent disability 7. <input type="checkbox"/> Could not find work or believed no jobs available in my particular field 8. <input type="checkbox"/> Did not want to work 9. <input type="checkbox"/> New job to begin within 30 days 10. <input type="checkbox"/> Waiting for school to begin 11. <input type="checkbox"/> Other, please specify: ↘ <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> | |

PART IV. EMPLOYMENT PROFILE

If you have never been employed, nor self-employed, please mark this box and SKIP TO QUESTION 39. Otherwise, CONTINUE with the instructions below.

In this part of the questionnaire, we are asking questions about the job you held during the week of May 9, 1982, or your most recent job before May 9. Please include any employment, including a military service job, not only a scientific or technical job. If you had more than one regular job during the week of May 9, record the one which you consider your principal employment.

18. For whom did you work? What is the name of the company, business or the government agency you worked for? 16

Check here if self-employed

19. Where were you employed, that is, in what city, county and state? 19

_____ (CITY OR TOWN)

_____ (COUNTY)

_____ (STATE OR FOREIGN COUNTRY)

20. Which of the categories below best describes the type of organization of your principal employment or post-doctoral appointment? (MARK ONLY ONE BOX) 25

- 01 Self-employed
- 02 Business or industry
- 03 Junior college, 2-year college, technical institute
- 04 Medical school
- 05 4-year college or university, other than medical school
- 06 Elementary or secondary school system
- 07 Hospital or clinic
- 08 Nonprofit organization, other than hospital, clinic or educational institution
- 09 U.S. military service, active duty, or Commissioned Corps, such as USPHS, NOAA, etc.
- 10 U.S. Government, civilian employee
- 11 State government
- 12 Local or other government (SPECIFY): _____

13 International agency

14 Other (SPECIFY): _____

21. If you had more than one job during the week of May 9, 1982, enter the category from the above list that is most appropriate for your second job. (ENTER THE APPROPRIATE CODE NUMBER, 01-14, FROM Q. 20 ABOVE) 27

Did not have a second job the week of May 9, 1982

22. From the activities listed below, select your primary and secondary work activities for your principal job as reported in question 18, in terms of time devoted for a typical week.
 (ENTER THE APPROPRIATE CODE NUMBER 01-16 FOR EACH)

Primary activity Secondary activity

- 01 Management or administration of research or development
- 02 Management or administration of other than research and development
- 03 Teaching and training - preparing and teaching courses, guiding and counseling students or trainees
- 04 Basic research - that is, study directed toward gaining scientific knowledge primarily for its own sake
- 05 Applied research - that is, study directed toward gaining scientific knowledge in an effort to meet a recognized need
- 06 Development - product, process, and technical development. That is, direction of knowledge gained from research toward production of useful materials, devices, systems and methods
- 07 Report and technical writing, editing, information retrieval
- 08 Clinical diagnosis
- 09 Design of equipment, processes, models
- 10 Quality control, testing, evaluation, or inspection
- 11 Operations - production, maintenance, construction, installation
- 12 Distribution - sales, traffic, purchasing, customer and public relations
- 13 Statistical work - survey work, forecasting, statistical analysis
- 14 Consulting
- 15 Computer applications
- 16 Other activities (SPECIFY): _____

23. During a typical week in your principal job reported in question 18, what percent of working time do you devote to each of the following activities?
 (ENTRIES SHOULD TOTAL 100%)

_____ % Management & administration

_____ % Basic research

_____ % Applied research

_____ % Development

_____ % Teaching

_____ % Operations, production

_____ % Other

100.0 % TOTAL

24. From the Degree and Employment Specialty List on page 2, select and enter the number and title of the specialty most closely related to your principal employment (reported in question 18) during the week of May 9, 1982.
 (PLEASE WRITE IN YOUR SPECIALTY IF IT IS NOT ON THE LIST)

Number:

Title : _____



| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>57</p> <p>25. For your principal job reported in question 18, what is the basic annual salary you <u>currently</u> earn? (Do <u>not</u> include bonuses, overtime, summer teaching or other payments for secondary jobs)</p> <p>\$ _____ .00 per year</p> <p><input type="checkbox"/> Not currently employed at that job.</p> | <p>3/a</p> <p>30. Which of the following agencies or departments were supporting your work? (MARK AS MANY AS APPLY)</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> AID--Agency for International Development 2. <input type="checkbox"/> Department of Agriculture 3. <input type="checkbox"/> Department of Commerce 4. <input type="checkbox"/> Department of Defense 5. <input type="checkbox"/> Department of Energy 6. <input type="checkbox"/> Department of Education (NIE, OE, NCES) 7. <input type="checkbox"/> Department of Health and Human Services (DHHS old HEW) 8. <input type="checkbox"/> Department of Housing and Urban Development (HUD) 9. <input type="checkbox"/> Department of the Interior 10. <input type="checkbox"/> Department of Justice 11. <input type="checkbox"/> Department of Labor (DOL) 12. <input type="checkbox"/> Department of Transportation 13. <input type="checkbox"/> EPA--Environmental Protection Agency 14. <input type="checkbox"/> NASA--National Aeronautics and Space Administration 15. <input type="checkbox"/> NSF--National Science Foundation 16. <input type="checkbox"/> Nuclear Regulatory Commission 17. <input type="checkbox"/> Other, <i>specify</i>: _____ <p>18. <input type="checkbox"/> Don't know source agency</p> |
| <p>62</p> <p>26. If academically employed in your principal job, is your salary for:</p> <p><input type="checkbox"/> 9-10 months, OR <input type="checkbox"/> 11-12 months?</p> | <p>26</p> <p>31. The following list contains selected areas of national interest. Indicate the <u>one</u> area to which you devote(d) the <u>most</u> professional time during a typical week at the job reported in question 18.</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Energy and fuel (GO TO Q. 32) 2. <input type="checkbox"/> Health 3. <input type="checkbox"/> Environment 4. <input type="checkbox"/> Education 5. <input type="checkbox"/> Teaching 6. <input type="checkbox"/> Other education 7. <input type="checkbox"/> National defense 8. <input type="checkbox"/> Crime prevention and control 9. <input type="checkbox"/> Food production and technology 10. <input type="checkbox"/> Other mineral resources 11. <input type="checkbox"/> Community development and service 12. <input type="checkbox"/> Housing (planning, design, construction) 13. <input type="checkbox"/> None of the above <p>(SKIP TO QUESTION 36)</p> |
| <p>63</p> <p>27. What was your <u>total</u> professional income in 1981 including basic annual salary, bonuses, overtime, summer teaching, consulting fees, etc.?</p> <p>\$ _____ .00 per year</p> <p><input type="checkbox"/> None</p> | |
| <p>68</p> <p>28. What was your basic annual salary in 1981 from the principal job you held <u>longest</u>, excluding bonuses, overtime, summer teaching, consulting fees, etc.?</p> <p>\$ _____ .00 per year</p> <p><input type="checkbox"/> None</p> | |
| <p>73</p> <p>29. During the week of May 9, 1982, was any of your work at your principal job supported by U.S. Government funds?</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Yes → (GO TO QUESTION 30) 2. <input type="checkbox"/> No 3. <input type="checkbox"/> Don't know → (SKIP TO Q. 31) | |

28

32. What is your best estimate of the percent of your professional time that you devote(d) to energy and fuel during a typical week?

1. 100 percent
 2. 75 to 99 percent
 3. 50 to 74 percent
 4. 25 to 49 percent
 5. 24 percent or less

29

33. From the list below, indicate the one energy source that involves(d) the largest proportion of your energy-related work during a typical week.

1. Coal and coal products
 2. Petroleum (including oil shale and tar sands) or natural gas
 3. Fission
 4. Fusion
 5. Hydroenergy
 6. Direct solar (including space and water heating, thermal, electric)
 7. Indirect solar (winds, tides, biomass, etc.)
 8. Geothermal
 9. Other, *specify*: _____

31

34. From the list of energy-related activities below indicate the item(s) that best describe the activity(ies) in which you were engaged during a typical week. (MARK AS MANY AS APPLY)

1. Exploration
 2. Extraction (gas, oil, mining)
 3. Manufacture of energy-related components or products
 4. Fuel processing (including refining and enriching)
 5. Electric power generation
 6. Transportation, transmission, distribution of fuel or energy
 7. Energy storage
 8. Energy utilization, management
 9. Fuel reprocessing or disposal
 10. Energy conservation
 11. Environmental impact (health, economic, etc.)
 12. Education, training
 13. Other, *specify*: _____

44

35. From the list in question 34, enter the number of the activity that best describes the one in which you spend(t) most of your energy-related time. (ENTER THE APPROPRIATE CODE NUMBER 01-13, FROM Q. 34)

PART V. OTHER INFORMATION

36. During calendar year 1981, how many weeks: ⁴⁶

a) did you work, including paid vacation, paid sick leave, and military service? _____

b) were you without a job, but looking for work; or on layoff from a job? _____

c) were you not working, not seeking work, and not on layoff from a job? _____

TOTAL = 52 weeks

52

37. How many years of professional work experience, including teaching, do you have?

_____ Year(s) or None

54

38. Since age 22, have you had any periods of at least one year's duration when you were neither employed, nor looking for work, nor attending school full-time? (DO NOT INCLUDE TIME IN ARMED FORCES)

1. Yes, a total of _____ year(s).
 2. No

56

39. Using the list on page 2, complete the following statement:

"Based on my total education and experience, I regard myself professionally as a (an)....."

CODE:



111