



NATIONAL SCIENCE FOUNDATION
ARLINGTON, VA 22230

**SURVEY OF RESEARCH AND DEVELOPMENT EXPENDITURES
AT UNIVERSITIES AND COLLEGES, FY 2000**

Organizations are requested to complete and return this form to:

QRC Division of Macro International Inc.
7315 Wisconsin Avenue, Suite 400W
Bethesda, MD 20814-3202

If you prefer, your response to the survey may be sent by email to:

jgreer@qrc.com

This form should be returned by January 29, 2001.

REMEMBER: Now you can submit your data on the Web at <http://www.qrc.com/expweb>. For more information, please see the informational brochure on the Web collection. Please note that your Web user ID and password are printed on the adjacent label, which also contains your name and address.

Your cooperation in returning the survey questionnaire promptly is very important.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of \$25,342 should be rounded to the nearest thousand dollars and reported as \$25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Data on research centers and facilities administered by your institution should be included. In addition, include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools.

NOTE: Academic institutions should exclude data for federally funded research and development centers (FFRDCs). Data for these facilities are collected separately.

Please correct if name or address has changed

If you have any questions please contact Marge Machen of NSF at (703) 292-7786, or Jennifer Greer of QRC at (301) 657-3077, ext. 132.

Financial data are requested for your institution's 2000 fiscal year.

Please circle the month in which your institution's fiscal year begins

| | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| JAN | | | | | | | | | | | DEC |

Do you include expenditure data for R&D performed at a hospital?

Yes No

If so, please name the hospital. _____

It is estimated that response to this survey will require 13 hours. If you wish to comment on this burden, please contact Suzanne H. Plimpton of NSF at (703) 292-7556, or email splimpto@nsf.gov.

How many person hours were required to complete this form? _____

Date submitted _____

Scope:

This survey collects data on expenditures by universities and colleges for separately budgeted research and development (R&D) in science and engineering. Definitions used are compatible with OMB Circular A-21, revised April 26, 1996. Items 1 and 2 ask for *current fund expenditures* by source of funds and by field of science and engineering. Item 3 collects data on that *portion of current fund expenditures* reported in Items 1 and 2 that went for the purchase of scientific and engineering research equipment.

Definitions:

Research and Development (R&D). R&D for purposes of this survey is the same as "organized research" as defined in Section B.1.b. of OMB Circular A-21 (revised). It includes all R&D activities of an institution that are *separately budgeted and accounted for*. R&D includes both "sponsored research" activities (sponsored by Federal and non-Federal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).

Research is systematic study directed toward fuller knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the investigator.

Development is systematic use of the knowledge or understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.

Current fund expenditures. These are expenditures of funds available for current operations. Such expenditures include all unrestricted gifts and restricted current funds to the extent that such funds were expended for current operating purposes.

PERSON WHO SUBMITTED THIS FORM (PLEASE TYPE OR PRINT)

| | |
|--------|-------------------|
| NAME: | TELEPHONE NUMBER: |
| TITLE: | EMAIL: |
| | FAX: |

PERSON WHO PREPARED THIS FORM (IF DIFFERENT FROM ABOVE)

| | |
|--------|-------------------|
| NAME: | TELEPHONE NUMBER: |
| TITLE: | EMAIL: |
| | FAX: |

Instructions for Items 1 and 2

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. *Include* research equipment purchased under research project awards from "current fund" accounts. Also *include* research funds for which an outside organization, educational or other, is a subrecipient. *Exclude* training grants, public service grants, demonstration projects, clinical trials, and departmental research expenditures that are not separately budgeted. Also, *exclude* any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, as well as all other non-science fields. Allocate funding to the original sources whenever possible, as specified below. If this information is unknown, report the proximate funding source.

Total

- a. **Federal Government.** Report awards for R&D (including direct and reimbursed indirect costs) by all agencies of the Federal Government.
- b. **State and local governments.** Include funds for R&D (including direct and reimbursed indirect costs) from state, county, municipal, or other local governments and their agencies. Include here state funds that support R&D at agricultural and other experiment stations.
- c. **Industry.** Include all awards for R&D (including direct and reimbursed indirect costs) from profit-making organizations, whether engaged in production, distribution, research, service, or other activities. Do not include awards from nonprofit foundations financed by industry; these should be reported under "All other sources" (line 1175).
- d. **Institution funds.** Report funds, *including* related indirect costs, that your institution spent for R&D activities from the following unrestricted sources: general-purpose state or local government appropriations; general-purpose awards from industry, foundations, or other outside sources; tuition and fees; endowment income; gifts; and other institutional funds. In addition, estimate your institution's on-campus and off-campus unreimbursed indirect costs associated with externally funded R&D projects, including mandatory and voluntary cost sharing. To estimate unreimbursed indirect costs, preferably on a project-by-project basis, use your appropriate on-campus or off-campus **negotiated research indirect cost rate(s)** multiplied by the corresponding base(s) minus actual indirect cost recovery.
- e. **All other sources.** Include awards for R&D (including direct and reimbursed indirect costs) from nonprofit foundations and voluntary health agencies as well as from all other sources not elsewhere classified. Funds from foundations that are affiliated with, or granted solely to your institution, should be included under line 1160, "Institution funds." Funds for R&D received from a health agency that is a unit of a state or local government should be reported under "State and local governments" (line 1125). Also include gifts from individuals that are restricted by the donor to research.

Instructions for Items 1A and 1B

For Federal awards, **subrecipient** means the entity that expends Federal awards received from a pass-through entity to carry out a Federal program, but does not include an individual that is a beneficiary of such a program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency. —OMB Circular A-133, Section .105 (revised April 22, 1996) For awards from non-Federal sources, the subrecipient definition is analogous to the Federal one.

Educational [subrecipients] refers to all academic colleges and universities and all units owned, operated, and controlled by such institutions.

ITEM 1. CURRENT FUND EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS: FY 2000 (Include indirect costs)

| Source of Funds | Line No. | (1) Total (Dollars in Thousands) | (2) |
|--|----------|---|--|
| | | | Percentages of Total & Federal Funds That Are Basic Research |
| a. Federal Government | 1110 | \$ | _____ % |
| b. State and local governments | 1125 | | Basic research is directed toward an increase of knowledge. It is research where the primary aim of the investigator is a fuller knowledge or understanding of the subject under study rather than a specific application thereof. |
| c. Industry | 1150 | | |
| d. Institution funds (sum of lines 1161 and 1162) | 1160 | | |
| (1) Institutionally financed organized research | 1161 | | |
| (2) Unreimbursed indirect costs and related sponsored research | 1162 | | |
| e. All other sources | 1175 | | |
| f. TOTAL (sum of a through e) | 1100 | \$ | _____ % |

BASIC RESEARCH
Please provide the percentages of total and Federal expenditures that are basic research (not applied research) as defined in column (2).

CONFIDENTIALITY
Information received from individual institutions in lines 1161 and 1162, or estimates for basic research expenditures, will NOT be published or released; only aggregate totals will appear in tabulations.

ITEM 1A. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING PASSED THROUGH THE INSTITUTION TO SUBRECIPIENTS

| Subrecipients | Line No. | Dollars in Thousands | |
|---------------------------|----------|----------------------|-------------|
| | | (1) Total | (2) Federal |
| Educational subrecipients | 1910 | | |
| Other subrecipients | 1920 | | |
| Total | 1900 | | |

How much of your total R&D (line 1100) and Federal R&D (line 1110) expenditures was passed through by your institution to subrecipients?

ITEM 1B. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED R&D IN THE SCIENCES AND ENGINEERING RECEIVED AS A SUBRECIPIENT

| Your Institution as a Subrecipient | Line No. | Dollars in Thousands | |
|------------------------------------|----------|----------------------|-------------|
| | | (1) Total | (2) Federal |
| Educational expenditures | 1610 | | |
| Other expenditures | 1620 | | |
| Total | 1600 | | |

How much of your total R&D (line 1100) and Federal R&D (line 1110) expenditures did your institution receive as a subrecipient?

**ITEM 2. CURRENT FUND EXPENDITURES
(TOTAL AND FEDERALLY FINANCED)
FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT,
BY FIELD OF SCIENCE AND ENGINEERING: FY 2000
(Include indirect costs)**

Please note that total R&D expenditures in line 1400, column (1) should be the same as reported in Item 1, line 1100, column 1.

Federally financed R&D expenditures in line 1400, column (2) should be the same as reported in Item 1, line 1110, column 1.

| Field of science & engineering | Line No. | (Dollars in thousands) | |
|--|----------|------------------------|-------------|
| | | (1) Total | (2) Federal |
| a. ENGINEERING (TOTAL) | 1410 | | |
| (1) Aeronautical & astronautical | 1411 | | |
| (2) Bioengineering/biomedical engineering | 1418 | | |
| (3) Chemical | 1412 | | |
| (4) Civil | 1413 | | |
| (5) Electrical | 1414 | | |
| (6) Mechanical | 1415 | | |
| (7) Metallurgical & materials | 1417 | | |
| (8) Other | 1416 | | |
| b. PHYSICAL SCIENCES (TOTAL) | 1420 | | |
| (1) Astronomy | 1421 | | |
| (2) Chemistry | 1422 | | |
| (3) Physics | 1423 | | |
| (4) Other | 1424 | | |
| c. ENVIRONMENTAL SCIENCES (TOTAL) | 1430 | | |
| (1) Atmospheric | 1431 | | |
| (2) Earth sciences | 1432 | | |
| (3) Oceanography | 1433 | | |
| (4) Other | 1434 | | |
| d. MATHEMATICAL SCIENCES (TOTAL) | 1441 | | |
| e. COMPUTER SCIENCES (TOTAL) | 1442 | | |
| f. LIFE SCIENCES (TOTAL) | 1450 | | |
| (1) Agricultural | 1451 | | |
| (2) Biological | 1452 | | |
| (3) Medical | 1453 | | |
| (4) Other | 1454 | | |
| g. PSYCHOLOGY (TOTAL) | 1460 | | |
| h. SOCIAL SCIENCES (TOTAL) | 1470 | | |
| (1) Economics | 1471 | | |
| (2) Political science | 1472 | | |
| (3) Sociology | 1473 | | |
| (4) Other | 1474 | | |
| i. OTHER SCIENCES, not elsewhere classified (TOTAL) | 1480 | | |
| j. TOTAL (sum of a through i) | 1400 | | |

Please EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other non-science and engineering fields.

**ITEM 3. CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT (TOTAL AND FEDERALLY FINANCED)
FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT,
BY FIELD OF SCIENCE AND ENGINEERING: FY 2000**

Please report that portion of current fund expenditures reported in items 1 and 2 that went for the purchase of research equipment. This includes all research equipment purchased under sponsored research project awards from current fund accounts.

For column (1), report current fund expenditures for R&D from all sources: Federal Government, state, county, municipal or other governments and their agencies (including state funds supporting R&D at agricultural experiment stations); industry; institution funds; and private foundations and voluntary health agencies, individuals, and associations.

For column (2), include funds from awards for R&D sponsored by agencies of the Federal Government.

| Field of science & engineering | Line No. | (Dollars in thousands) | |
|--|----------|------------------------|-------------|
| | | (1) Total | (2) Federal |
| a. ENGINEERING (TOTAL) | 1810 | | |
| (1) Aeronautical & astronautical | 1811 | | |
| (2) Bioengineering/biomedical engineering | 1818 | | |
| (3) Chemical | 1812 | | |
| (4) Civil | 1813 | | |
| (5) Electrical | 1814 | | |
| (6) Mechanical | 1815 | | |
| (7) Metallurgical & materials | 1817 | | |
| (8) Other | 1816 | | |
| b. PHYSICAL SCIENCES (TOTAL) | 1820 | | |
| (1) Astronomy | 1821 | | |
| (2) Chemistry | 1822 | | |
| (3) Physics | 1823 | | |
| (4) Other | 1824 | | |
| c. ENVIRONMENTAL SCIENCES (TOTAL) | 1830 | | |
| (1) Atmospheric | 1831 | | |
| (2) Earth sciences | 1832 | | |
| (3) Oceanography | 1833 | | |
| (4) Other | 1834 | | |
| d. MATHEMATICAL SCIENCES (TOTAL) | 1841 | | |
| e. COMPUTER SCIENCES (TOTAL) | 1842 | | |
| f. LIFE SCIENCES (TOTAL) | 1850 | | |
| (1) Agricultural | 1851 | | |
| (2) Biological | 1852 | | |
| (3) Medical | 1853 | | |
| (4) Other | 1854 | | |
| g. PSYCHOLOGY (TOTAL) | 1860 | | |
| h. SOCIAL SCIENCES (TOTAL) | 1870 | | |
| (1) Economics | 1871 | | |
| (2) Political science | 1872 | | |
| (3) Sociology | 1873 | | |
| (4) Other | 1874 | | |
| i. OTHER SCIENCES, not elsewhere classified (TOTAL) | 1880 | | |
| j. TOTAL (sum of a through i) | 1800 | | |

Current fund expenditures in each field for scientific research equipment is that PORTION or SUBTOTAL of the amounts reported in the corresponding cells of the "Total" and "Federal" columns in Item 2.

**CROSSWALK BETWEEN NSF FIELDS OF SCIENCE & ENGINEERING AND THE
NATIONAL CENTER FOR EDUCATION STATISTICS (NCES) CLASSIFICATION OF INSTRUCTIONAL PROGRAMS**

The left-hand column shows each of the detailed fields as displayed on the questionnaire form. The right-hand column shows the NCES fields that are included within the NSF category as well as some additional illustrative disciplines. These additional disciplines are intended to be guidelines—not sharp definitions—as to what should be reported under a particular field.

| Questionnaire Field | NCES Classification and Additional Illustrative Disciplines | | | |
|--|--|--|--|--|
| a. ENGINEERING (1) Aeronautical & Astronautical | 14.02 Aerospace, Aeronautical, and Astronautical Engineering (also aerodynamics, space technology) | | | |
| (2) Bioengineering/ Biomedical Engineering | 14.05 Bioengineering and Biomedical Engineering | | | |
| (3) Chemical | 03.0509 Wood Science (also petroleum refining process) | 14.07 Chemical Engineering 14.32 Polymer/Plastics Engineering | 14.25 Petroleum Engineering | |
| (4) Civil | 04.02 Architecture 14.14 Environmental/Environmental Health Engineering (also geotechnical, hydraulic, hydrologic, sanitary and environmental, structural, transportation) | | | |
| (5) Electrical | 14.09 Computer Engineering (also power engineering) | | | |
| (6) Mechanical | 14.10 Electrical, Electronics, and Communications Engineering | | | |
| (7) Metallurgical & Materials | 14.11 Engineering Mechanics | 14.19 Mechanical Engineering | | |
| (8) Other | 14.06 Ceramic Sciences and Eng. 14.18 Materials Engineering 14.28 Textile Sciences and Eng. (also welding) | 14.15 Geological Engineering 14.20 Metallurgical Engineering 14.31 Materials Science | 14.16 Geophysical Engineering 14.21 Mining and Mineral Eng. 40.0701 Metallurgy | |
| b. PHYSICAL SCIENCES (1) Astronomy | 14.01 Engineering, General 14.13 Engineering Science 14.23 Nuclear Engineering 14.27 Systems Engineering 14.99 Engineering, Other (also marine and ocean engineering systems) | | | |
| (2) Chemistry | 40.02 Astronomy 40.03 Astrophysics (also Gamma-ray, neutrino, optical and radio, X-ray) | | | |
| (3) Physics | 40.05 Chemistry (also analytical, inorganic, organic, organo-metallic, pharmaceutical, physical, polymer sciences (except biochemistry)) | | | |
| (4) Other | 40.08 Physics (also acoustics, atomic/molecular, chemical, condensed matter, elementary particles, nuclear structure, optics, plasma, theoretical/mathematical) | | | |
| c. ENVIRONMENTAL SCIENCES (Earth, Atmospheric, & Ocean) (1) Atmospheric | 40.01 Physical Sciences, General 40.0799 Miscellaneous Physical Sciences, Other (used for multidisciplinary projects within physical sciences and for disciplines not requested separately) | | | |
| (2) Earth Sciences | 40.04 Atmospheric Sciences and Meteorology (also aeronomy, extraterrestrial atmospheres, solar, weather modification) | | | |
| (3) Oceanography | 15.1102 Surveying 40.0703 Earth & Planetary Sciences (also engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic, isotopic, lab geophysics, organic geochemistry, paleomagnetism, paleontology, physical geography, seismology) | 40.06 Geological and Related Sciences 45.0702 Cartography | | |
| (4) Other | 26.0607 Marine/Aquatic Biology (also biological, chemical, geological, physical) | | | |
| d. MATHEMATICAL SCIENCES | 40.0702 Oceanography (used for multidisciplinary projects within Earth, Atmospheric, and Ocean Sciences) | | | |
| | 27.01 Mathematics, General 27.03 Applied Mathematics 27.05 Mathematical Statistics 27.99 Mathematics, Other (also algebra, analysis, foundations and logic, geometry, numerical analysis, topology) | | | |
| | 27.0302 Operations Research 30.08 Math./Computer Sciences | | | |

| Questionnaire Field | NCES Classification and Additional Illustrative Disciplines (cont.) | | | |
|--|--|--|--|--|
| e. COMPUTER SCIENCES | 11 Computer and Information Science, General 52.1201 Management Information Systems (also design, development, and application of computer capabilities to data storage and manipulation, information science) | | | |
| f. LIFE SCIENCES (1) Agricultural | 01.03 Agricultural Production 01.0303 Aquaculture 01.07 International Agriculture 02.01 Agricultural Sciences 02.04 Plant Sciences 02.05 Soil Science 03 Renewable Natural Resources 04.06 Landscape Architecture (also agricultural chemistry, agronomy, animal science, conservation, fish and wildlife, forestry, horticulture) | | | |
| (2) Biological | 19.05 Foods and Nutrition Studies 26.01 Biology, General 26.0202 Biochemistry 26.0203 Biophysics 26.03 Botany 26.04 Cell and Molecular Biology 26.05 Microbiology/Bacteriology 26.0601 Anatomy 26.0603 Ecology 26.0609 Nutritional Sciences 26.0610 Parasitology 26.0612 Toxicology 26.0613 Genetics, Plant and Animal 26.0614 Biometrics 26.0615 Biostatistics 26.0699 Misc. Bio. Specializations, Other 26.0701 Zoology 26.0702 Entomology 26.0704 Pathology, Human and Animal 26.0705 Pharmacology, Human and 26.0706 Physiology, Human and 26.0799 Zoology, Other Animal Animal 26.99 Biol./Life Sciences, Other 51.1301 Medical Anatomy 51.1302 Medical Biochemistry 51.1307 Medical Immunology 51.1308 Medical Microbiology 51.1312 Medical Pathology 51.1313 Medical Physiology 51.1314 Medical Toxicology 51.2203 Epidemiology (also allergies and immunology, biogeography, biotechnology, pathology, physical anthropology, virology) | | | |
| (3) Medical | 26.0608 Neurosciences 26.0611 Radiation Biology/Radiobiol. 51.04 Dentistry 51.1201 Medicine, General 51.1399 Med. Basic Sciences, Other 51.1610 Nursing Psychiatry/ 51.17 Optometry 51.19 Osteopathic Medicine Mental Health 51.20 Pharmacy 51.21 Podiatry 51.22 Public Health 51.24 Veterinary Medicine ¹ Anesthesiology Cardiology Colon and Rectal Surgery Dental/Oral Surgery Dermatology Family Medicine Gastroenterology General Surgery Geriatric Medicine Hematology Internal Medicine Medical Programs, Other Neonatal-Perinatal Medicine Neurological Surgery Neurology Nuclear Medicine Nuclear Radiology Obstetrics and Gynecology Oncology Ophthalmology Orthopedics/Orthopedic Surgery Otorhinolaryngology Pediatrics Pharmacology Physical and Rehabilitative Medicine Plastic Surgery Preventive Medicine Psychiatry Thoracic Surgery Urology (exclude all residency programs) | | | |
| (4) Other | 30.11 Gerontology 51.02 Communication Disorders 51.07 Health and Medical 51.10 Health and Medical Laboratory Sciences and Services Administrative Services Technologies 51.16 Nursing Technologies 51.2306 Occupational Therapy 51.2308 Physical Therapy 51.2399 Rehab./Therapeutic Services 51.99 Health Professions and Related Services, Other (used for multidisciplinary projects within life sciences) | | | |
| g. PSYCHOLOGY | 42.01 Psychology, General 42.02 Clinical Psychology 42.17 School Psychology 51.2301 Art Therapy (also animal behavior, educational, experimental, human development and personality, social) | | | |
| h. SOCIAL SCIENCES (1) Economics | 01.0103 Agricultural Economics 45.06 Economics 52.06 Business/Managerial Econ. (also applied, development, econometrics, industrial, international, labor, public finance and fiscal policy, quantitative, resource) | | | |
| (2) Political Science | 44.04 Public Administration 44.05 Public Policy Analysis 44.99 Public Admin. and Services, Other 45.09 International Relations and Affairs 45.10 Political Science and Government (also comparative government, legal systems, political theory, regional studies) | | | |
| (3) Sociology | 45.02 Anthropology (Social and 45.05 Demography and 45.11 Sociology Cultural only) Population Studies (also comparative and historical, complex organizations, cultural and social structure, group interactions, social problems and welfare theory) | | | |
| (4) Other | 04.03 City/Urban, Community, and 05 Area and Ethnic Studies 16.0102 Linguistics Regional Planning 43.01 Crim'l. Justice & Corrections 44.02 Community Services 45.01 Social Sciences, General 45.03 Archaeology 45.07 Geography 45.12 Urban Studies/Affairs 45.99 Social Sciences, Other (also history of science, socioeconomic geography) | | | |
| I. OTHER SCIENCES, n.e.c. | (used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible) | | | |

¹ Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.



**OPTIONAL ITEM 2A. CURRENT FUND EXPENDITURES
(TOTAL AND FEDERALLY FINANCED)
FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT
BY NON-SCIENCE AND ENGINEERING FIELD: FY 2000
(Include indirect costs)**

NOTE: For rows 2A(a) through 2A(i), report only data that have not been reported in Items 1 and 2 on this survey. Non-S&E R&D should include any separately budgeted scholarly and creative activity, but should exclude training.

| Non-science & engineering fields | Line No. | (Dollars in thousands) | |
|--|----------|------------------------|-------------|
| | | (1) Total | (2) Federal |
| a. EDUCATION | 1510 | | |
| b. LAW | 1520 | | |
| c. HUMANITIES | 1530 | | |
| d. VISUAL & PERFORMING ARTS | 1540 | | |
| e. BUSINESS AND MANAGEMENT | 1550 | | |
| f. COMMUNICATIONS, JOURNALISM, AND LIBRARY SCIENCE | 1560 | | |
| g. SOCIAL WORK | 1570 | | |
| h. OTHER NON-S&E FIELDS, please specify: | 1580 | | |
| i. TOTAL, NON-S&E FIELDS | 1500 | | |
| j. TOTAL, S&E (from Item 2, line j) | 1400 | | |
| k. GRAND TOTAL | 1600 | | |

NOTE: If you cannot provide expenditures by non-S&E fields, please provide the Total (column 1, line 1500) and Federal Total (column 2, line 1500).

**CROSSWALK BETWEEN NSF NON-SCIENCE & ENGINEERING FIELDS AND THE NATIONAL CENTER FOR
EDUCATION STATISTICS (NCES) CLASSIFICATION OF INSTRUCTIONAL PROGRAMS**

| Questionnaire Field | CIP Code | CIP Program Category Title |
|---|----------|---|
| Education | 13.xx | Education |
| Law | 22.xx | Law and Legal Studies |
| Humanities | 16.xx | Foreign Languages & Literature |
| | 23.xx | English Language and Literature/Letters |
| | 24.xx | Liberal Arts & Sciences, General Studies & Humanities |
| | 38.xx | Philosophy and Religion |
| | 39.xx | Theological Studies and Religious Vocations |
| | 45.08 | History (except History of Science) |
| Visual & Performing Arts | 50.xx | Visual and Performing Arts |
| Business and Management | 52.xx | Business Management and Administrative Services |
| | 08.xx | Marketing Operations/Marketing Distribution |
| Communications, Journalism, and Library Science | 09.xx | Communications |
| | 25.xx | Library Science |
| | 10.xx | Communications Technologies |
| Social Work | 44.07 | Social Work |
| Other Non-S&E Fields | 31.xx | Parks, Recreation, Leisure and Fitness Studies |
| | 29.xx | Military Technologies |

OPTIONAL ITEM 2B

CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE & ENGINEERING: FY 2000 (Include indirect costs)

Please note that total R&D expenditures in line 1400, column (1) should be the same as reported in Item 1, line 1100, column 1. Federally financed R&D expenditures in line 1400, column (2) should be the same as reported in Item 1, line 1110, column 1.

Allocate funding to the original sources whenever possible. If that information is unknown, report the proximate funding source.

KEY: USDA, Department of Agriculture; DoD, Department of Defense; DOE, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" Federal sources include all other Federal agencies.

| | | (Dollars in thousands) | | | | | | | | |
|---|----------|------------------------|---------------|---------------------------|-----|-----|------|------|-----|-------|
| Field of science and engineering | Line No. | TOTAL ALL | TOTAL FEDERAL | SPECIFIC FEDERAL AGENCIES | | | | | | |
| | | | | USDA | DoD | DOE | HHS* | NASA | NSF | Other |
| a. Engineering (Total) | 1410 | | | | | | | | | |
| (1) Aeronautical & astronautical | 1411 | | | | | | | | | |
| (2) Bioengineering/biomedical engineering | 1418 | | | | | | | | | |
| (3) Chemical | 1412 | | | | | | | | | |
| (4) Civil | 1413 | | | | | | | | | |
| (5) Electrical | 1414 | | | | | | | | | |
| (6) Mechanical | 1415 | | | | | | | | | |
| (7) Metallurgical & materials | 1417 | | | | | | | | | |
| (8) Other | 1416 | | | | | | | | | |
| b. Physical Sciences (Total) | 1420 | | | | | | | | | |
| (1) Astronomy | 1421 | | | | | | | | | |
| (2) Chemistry | 1422 | | | | | | | | | |
| (3) Physics | 1423 | | | | | | | | | |
| (4) Other | 1424 | | | | | | | | | |
| c. Environmental Sciences (Total) | 1430 | | | | | | | | | |
| (1) Atmospheric | 1431 | | | | | | | | | |
| (2) Earth sciences | 1432 | | | | | | | | | |
| (3) Oceanography | 1433 | | | | | | | | | |
| (4) Other | 1434 | | | | | | | | | |
| d. Mathematical Sciences (Total) | 1441 | | | | | | | | | |
| e. Computer Sciences (Total) | 1442 | | | | | | | | | |
| f. Life Sciences (Total) | 1450 | | | | | | | | | |
| (1) Agricultural | 1451 | | | | | | | | | |
| (2) Biological | 1452 | | | | | | | | | |
| (3) Medical | 1453 | | | | | | | | | |
| (4) Other | 1454 | | | | | | | | | |
| g. Psychology (Total) | 1460 | | | | | | | | | |
| h. Social Sciences (Total) | 1470 | | | | | | | | | |
| (1) Economics | 1471 | | | | | | | | | |
| (2) Political science | 1472 | | | | | | | | | |
| (3) Sociology | 1473 | | | | | | | | | |
| (4) Other | 1474 | | | | | | | | | |
| i. Other Sciences (Total) | 1480 | | | | | | | | | |
| j. Total (sum of a through i) | 1400 | | | | | | | | | |

Please EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other non-science and engineering fields. * Includes NIH.

When complete, please submit via the Web at www.qrc.com/expweb
or mail to:

Jennifer Greer
QRC Division of Macro International Inc.
7315 Wisconsin Ave., Suite 400W
Bethesda, MD 20814-3202

BASIC RESEARCH

How should basic research be calculated?

The percentage of basic research should be defined at the individual grant level by each principal researcher. Where this is not possible, grants should be reviewed by each department head or other relevant research coordinator.

Here is another method used by one institution to estimate the amounts of basic and applied research: All federally funded grants and R&D funded from other universities, foundations, and nonprofit organizations are considered to be basic research. R&D funds received through Federal cooperative agreements and Federal contracts, all state-funded R&D (except that from the state's Advanced Research Program), and R&D funds received from private for-profit institutions are considered to be applied research.

DATA USES AND AVAILABILITY

How are these data typically used?

Congress and Federal and state government planners use the data for science policy analysis, national and international studies, legislative hearing reports, budget formulation sessions, and other measurements of the adequacy of the nation's research base. Academic institutions use the information for policy analysis, publicity, and other purposes. Industrial firms often request data to prepare for on-campus recruiting. The data often appear in higher education studies and publications.

How are the data made available?

NSF's annual *Academic Research and Development Expenditures Survey* compiles detailed data in a comprehensive document, available on request. Institutional profiles show trend data for responses at the institutional level from all academic S&E surveys.

Survey data are now available through the World Wide Web on the Internet. To obtain the most recent survey publications and data tables, data files, institutional profiles, and access to WebCASPAR, the Web-based Computer-Aided Science Policy Analysis and Research database system, direct your browser to <http://www.nsf.gov/sbe/srs/stats.htm>.

**For more information, contact Marge Machen at
(703) 292-7786 (email: mmachen@nsf.gov).**

Questions and Answers

This booklet answers common questions about the academic R&D expenditures survey.

FIELD OF SCIENCE CLASSIFICATIONS

How should I assign field classifications for research and development (R&D) performed in interdisciplinary centers?

Interdisciplinary research should be categorized by individual research project according to the nature of the research performed. When individual projects encompass multiple fields of science and engineering (S&E), prorate expenditures to report the proportions of each discipline involved. Do not lump funds together into "other" field categories unless the type of research is actually defined as "other." NSF recommends crediting such research to the appropriate S&E discipline when the project first begins.

How should I allocate research dollars spent for computing or supercomputing services?

Report research dollars spent for computer usage to the individual fields of science and engineering for which the R&D is performed. Do not report these funds in computer science, unless computer science research was performed.

What fields should be excluded?

Exclude fields that are considered to be non-science—education, law, humanities, business, music, the arts, library science, and physical education. Note that you would report separately budgeted R&D for the philosophy of science (a science category), but not philosophy (one of the humanities). The NSF/NCES Crosswalk included with the questionnaire lists all S&E fields.

SOURCES OF FUNDING

Should faculty practice plan income be included in the survey?

Expenditures for faculty practice plans are not considered research and should not be included. If income from such plans is used to fund other research and the funds are separately budgeted, then the expenditures should be included in institutional funds.

How much of our administrative costs can be reported in the survey?

Administrative salaries and other administrative costs, particularly at your organized research units, can be reported only if funded through projects specifically restricted and budgeted for research. General administrative costs should not be reported.

How should I report institutional funds?

All research dollars reported for your institution should be funds that are separately budgeted and restricted for research, such as sponsored research accounts or general accounts that are specifically budgeted for research. Do not include funds not specifically budgeted for research.

If your institution does not track underrecovery of indirect costs, use the underrecovery formula included in the questionnaire instructions. Do not forget to include and distribute unreimbursed indirect costs by detailed field in survey Item 2.

Be sure to report all indirect costs related to your institutional funds.

Can I report donated research equipment in the survey?

Since donated research equipment is not typically captured in university accounting systems, the value of donated research equipment should not be reported.

COLLABORATIVE RESEARCH ARRANGEMENTS

Should I report expenditures received through collaborative research ventures with other institutions?

Report only what your institution actually expends and accounts for when participating in joint research ventures.

How do I distinguish between being a subrecipient of pass-through funds and being a subcontractor of R&D services?

A subrecipient is an entity that receives Federal financial assistance from the state or any other entity to administer a program (OMB Circular A-110). The subrecipient actually administers or controls the program, as opposed to the subcontractor who contracts for a specific service on a per-unit basis. A key factor in determining if a subrecipient arrangement exists is determining if the entity assumes the responsibility to administer the program. Subrecipients tend to be the co-authors of publications, writers of technical reports discussing findings, inventors, etc. Unlike a subrecipient relationship, a subcontract is a procurement of goods and/or services. Payments to subcontractors are expenditures for services, not expenditures for research, and are different from pass-through funds to subrecipients.

ORGANIZATIONAL UNITS

Which organizational units should I include in the survey?

Include research conducted through units that are considered part of your institution's organizational structure. For example, report expenditures from branch campuses, medical schools, agricultural stations, research centers and institutes, and any other units whose expenditures are separately budgeted and are accounted for by your institution's financial system. Exclude R&D expenditures performed by federally funded research and development centers (FFRDCs), nonprofit institutions, and private laboratories. Do not report salaries of faculty doing research at outside institutions unless your institution accounts for the funding of that research.

Academic R&D Expenditures

Security: Your data are password-protected to ensure confidentiality.

- Data reporting is easier—enter your data directly onto your computer screen.
- Help and instructions are readily available to you on each Web survey page.
- Data errors are reported to you instantly.

Everything's done on your computer screen. Totals are computed for you. Flags indicate when your survey is ready to submit to NSF.

How It Works

On your computer, open your Web browser (such as Netscape Navigator or Microsoft Internet Explorer) and visit <http://www.qrc.com/expweb>

Log in by entering the Institution ID and password you received from NSF. (If you forget them, email us at expweb@qrc.com).

Then you can . . .

- update your contact information and
- enter survey data.

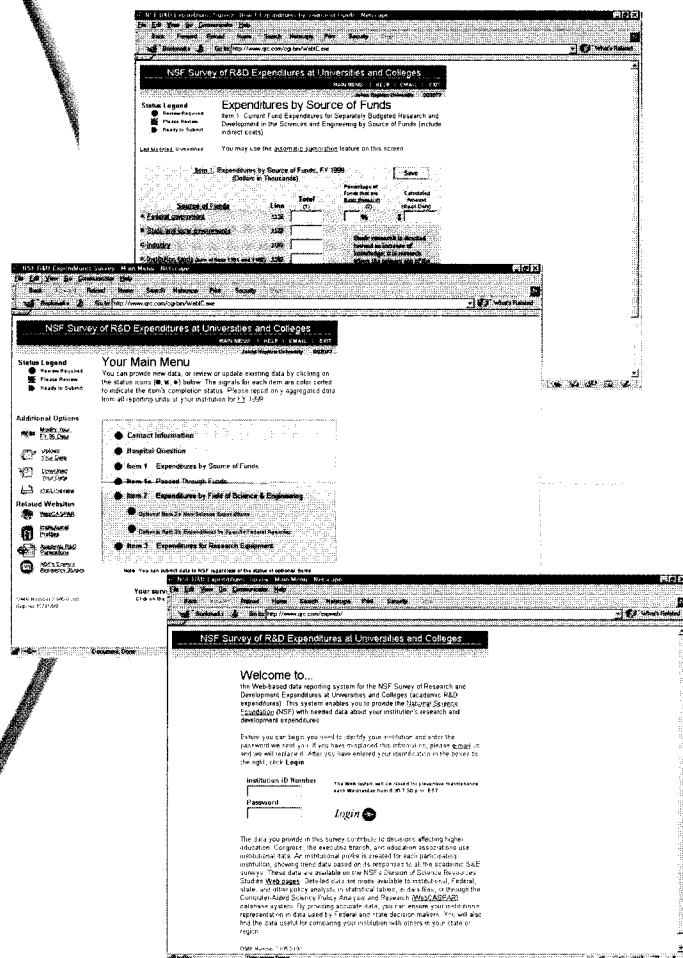
You Can Also

- print the finished survey on paper for your records
- work offline using spreadsheets and data files
- get personalized help on your computer screen

For Further Information

If you have any questions about this Web survey, please contact Jennifer Greer or Sujata Gamge by telephone at (301) 657-3070 or by email at expweb@qrc.com.

For any other survey data questions, please contact Marge Machen of NSF at (703) 292-7786 or by email at mmachen@nsf.gov.



More Features:

- You can review and revise your data at any time.
- The data are reviewed for errors every time you click on **Save**.
- Data are saved to a central database, accessible to you at your convenience.
- After you complete all survey questions, make the data available to NSF by the click of a button.