NATIONAL SCIENCE FOUNDATION

ARLINGTON, VA 22230

HIGHER EDUCATION RESEARCH AND DEVELOPMENT SURVEY
FY 2009

INTRODUCTION

This survey collects data on research and development (R&D) activities at higher education institutions. Previously this collection was known as the Survey of Research and Development Expenditures at Universities and Colleges. The revised name reflects the survey's expanded focus on measures of R&D activities in addition to expenditures. All questions refer to R&D activities and expenditures within your institution's 2009 fiscal year.

See page 2 for "What's New" in the survey. General survey definitions and instructions are provided on page 3.

YOUR SURVEY PARTICIPATION

Your participation in this survey provides important information on the national level of research activity. NSF is authorized to collect this information under the National Science Foundation Act of 1950, as amended. Your institution's response is entirely voluntary; your failure to provide some or all of the information will in no way adversely affect your institution.

QUESTIONS?

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Response to this revised survey is estimated to require (80) hours. Please report your actual completion time at the end of the questionnaire. If you wish to comment on this burden, please contact Suzanne H. Plimpton of NSF at (703) 292-7556, or e-mail splimpto@nsf.gov.

Please submit your survey data by January 29, 2010.

The web address for submitting your data:

http://www.nsfherdsurvey.org

Or mail this form to:

ATTN: NSF HERD Survey
Westat
1650 Research Blvd. Room TA2062
Rockville, MD 20850

Thank you for your participation.

What's New

The Higher Education Research & Development Survey, formerly the Survey of Research and Development Expenditures at Universities and Colleges, has undergone a redesign in consultation with experts, data users, and university representatives. This section briefly describes the changes and additions.

Include all fields of R&D in all survey items

Please note that this revised questionnaire includes all fields of R&D in all survey items, beginning with Question 1 and continuing throughout the questionnaire. Responses to all survey questions should include R&D in science and engineering fields as in the past, and R&D in all other fields such as humanities, education, law, and the arts. See question 9 for a complete listing of all fields of R&D.

Other general changes

- Many specific instructions have been moved to the questions they pertain to.
- Clinical trials and research training grants are now included in the definition of R&D.

Changes to Questions

- Sources of Funds (Question 1). Separate categories have been created for nonprofit organizations and for institutional cost sharing.
- Basic and Applied Research and Development (Question 6). This question now asks for expenditures associated with basic research, applied research, and development.
- Expenditures by Field and Source (Questions 9 and 12). Information on expenditures is collected by field of R&D for all sources of funds.
    - Question 9 collects R&D expenditures funded by specific federal agencies and total federal funding by field.
    - Question 12 collects information for each nonfederal source and total nonfederal funding by field.

New Questions

- Question 2. R&D expenditures of funds from foreign sources
- Question 3. R&D at medical schools
- Question 4. Clinical trial R&D expenditures
- Question 5. Contracts and grants
- Question 10. Other federal agency sources for R&D expenditures
- Question 11. Federally funded R&D expenditures at interdisciplinary research centers
- Question 13. Non-federally funded R&D expenditures at interdisciplinary research centers
- Question 14. Specific cost elements of R&D expenditures
- Questions 17 and 18. Counts of R&D personnel
- Questions 19 through 22. R&D proposal and award counts

Survey Definitions and Instructions

Research and development (R&D)
includes "organized research" as defined by **2 CFR 220** (**OMB Circular A-21**). Please include all R&D activities of an institution that are ***separately budgeted and accounted for*** (see definition below). 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).

Separately budgeted 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. Such expenditures include, among others, all those funded from unrestricted gifts and restricted current funds to the extent that such funds were expended for current operating purposes.

R&D ***includes:***	R&D does ***not*** include:
• Direct and indirect costs • Equipment purchased from R&D project accounts • Research funds passed through to a subrecipient organization, educational or other • Clinical trial research (Phases I, II, and III) • Research training grants (such as NIH K awards and T32 grants)	• Public service grants • Program evaluation • Departmental research expenditures that are not separately budgeted • Research conducted by university faculty or staff at outside institutions that is not accounted for in your financial records • Non-research training grants • Capital projects

Please ***include*** these components of your institution:	Please do ***not*** include:
• All branches of your institution included in or with your financial statements. Include units such as: o Agricultural experiment stations o Medical schools o Hospitals or clinics o Research centers and facilities o A university 501(c)3 research foundation established to handle R&D awards.	• Federally funded R&D centers (FFRDCs). This information is collected separately. For a complete list of FFRDCs, see http://www.nsf.gov/statistics/nsf05306/ • Other organizations or institutions, such as teaching hospitals or research institutes, with which your institution has an affiliation or relationship, but which are not components of your institution.

Question 1. How much of your total current fund expenditures for separately budgeted research and development (R&D) came from the following sources in FY 2009? *(See definition of R&D on the previous page.)*

- Include both **direct** and **recovered indirect costs** in rows a, b, c, d, and f.
- Report the **original source** of funds, when possible. For example, if you received **federal** funds from another university, report that amount under "U.S. federal government."
- Include all fields of R&D: sciences, engineering, humanities, education, law, arts, etc. See full listing in Question 9.

SOURCE OF FUNDS	R&D Expenditures (Dollars in thousands) (*for example, report $25,342 as $25*)
a. U.S. federal government Any agency of the United States government.	$_____
b. State and local government Any state, county, municipality, or other local government entity in the United States, including state health agencies. Include state funds that support R&D at agricultural and other experiment stations.	$_____
c. Industry Domestic or foreign for-profit organizations. (Report funds from a company's nonprofit foundation in row d.)	$_____
d. Nonprofit organizations Nonprofit foundations and organizations.	$_____
e. Institutional funds	
1. Institutionally financed organized research Include expenditures of university funds from unrestricted sources that are separately-budgeted for organized research.	$_____ (Confidential [1])
2. Cost sharing Include committed cost sharing other than unrecovered indirect costs. Report unrecovered indirect costs in row e3.	$_____ (Confidential [1])
3. Unrecovered indirect costs You may calculate this amount as follows for your externally funded R&D (preferably on a project-specific basis) using the appropriate cost rate—on-campus, off-campus, etc. • First, multiply the negotiated rate by the corresponding base. • Second, subtract recovered indirect costs.	$_____ (Confidential [1])
4. Total institutional funds[2]	$ TOTAL _____
f. All other sources Other sources not reported above, such as funds from foreign governments.	$_____
g. Total [2]	$ TOTAL _____

[1] Information from confidential items is NOT published or released for individual institutions; only aggregate totals will appear in publications.

[2] Row and column totals are automatically generated on the web survey.

Question 2. How much of the total R&D expenditures reported in Question 1, rows c, d, and f came from foreign sources?

- **Foreign sources** include foreign governments, industry, and nonprofit organizations located outside the U.S.
- Foreign sources do not include Puerto Rico or other territories of the United States.

	R&D Expenditures (Dollars in thousands)
Total R&D expenditures from foreign sources	$_____

Question 3. Of the total R&D expenditures reported in Question 1, row g, how much was expended for R&D projects in your medical school?

If your institution does **not** have a medical school (that is, a school that awards the M.D. or D.O. degree), check here and go to Question 4. ☐

- Include projects that are assigned to the medical school or to research centers that are organizationally part of the medical school.

	R&D Expenditures (Dollars in thousands)
Total R&D expenditures in the university's medical school	$_____

Question 4. Of the total R&D expenditures reported in Question 1, row g, how much was expended for Phase I, Phase II, and Phase III clinical trials?

	R&D Expenditures (Dollars in thousands)		
	(1) Human clinical trials	(2) Veterinary clinical trials	(3) Total [1]
a. Total R&D expenditures for clinical trials	$_____	$_____	$ TOTAL
b. Did you include R&D expenditures for clinical trials in your FY 2008 survey response?	☐ Yes ☐ No	☐ Yes ☐ No	NA

[1] Row and column totals are automatically generated on the web survey.

Question 5. Of the total R&D expenditures that were externally funded (all sources other than the institutional funds reported in Question 1, row e4), how much was received under each of the following types of agreements?

	R&D Expenditures (Dollars in thousands)
a. Contracts (including direct or prime contracts and subcontracts)	$_____
b. Grants, reimbursements, and all other agreements	$_____
c. Total (should match Question 1, row g minus row e4) [1]	$ TOTAL

[1] Row and column totals are automatically generated on the web survey..

Question 6. What amounts of your FY 2009 R&D expenditures were for basic research, applied research, and development? Estimates are acceptable.

	R&D Expenditures (Dollars in thousands)		
	(1) Federal	(2) Non-federal	(3) Total [1]
a. Basic research Research 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.	$_____	$_____	$_____
b. Applied research Research conducted to gain the knowledge or understanding to meet a specific, recognized need.	$_____	$_____	$_____
c. Development The systematic use of the knowledge or understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.	$_____	$_____	$_____
d. Total [1] Column 1 total should match Question 1, row a; Column 3 total should match Question 1, row g.	$ TOTAL	$ TOTAL	$ TOTAL

[1] Row and column totals are automatically generated on the web survey

Question 7. How much of your R&D expenditures reported in Question 1 did your institution receive as a subrecipient?

The **subrecipient** for an award carries out the work but receives the funds from a pass-through entity rather than directly from the original funding source. See OMB Circular A-133, Section 105 for the federal definition. Subrecipients tend to be the co-authors of publications, writers of technical reports discussing findings, inventors, etc.

Do **not** include vendor relationships. A vendor supplies goods and services. See OMB Circular A-133, Section 210.

Source of pass-through funding	R&D expenditures (1) Federal	(2) Non-federal	(3) Total [1]
		(Dollars in thousands)	
a. From higher education institutions			
Academic colleges and universities and units owned, operated, and controlled by such institutions.	$_____	$_____	$ TOTAL
b. From other sources	$_____	$_____	$ TOTAL
c. Total [1]	$ TOTAL	$ TOTAL	$ TOTAL

[1] Row and column totals are automatically generated on the web survey.

Question 8. How much of your R&D expenditures reported in Question 1 were passed through by your institution to subrecipients?

Do **not** include vendor relationships. A vendor supplies goods and services. See OMB Circular A-133, Section 210.

Type of subrecipient	R&D expenditures (1) Federal	(2) Non-federal	(3) Total [1]
		(Dollars in thousands)	
a. To higher education institutions			
Academic colleges and universities and units owned, operated, and controlled by such institutions.	$_____	$_____	$ TOTAL
b. To other organizations	$_____	$_____	$ TOTAL
c. Total [1]	$ TOTAL	$ TOTAL	$ TOTAL

[1] Row and column totals are automatically generated on the web survey.

Question 9. What were your FY 2009 R&D expenditures for the federal agencies below in each field of R&D? (Expenditures funded by nonfederal sources will be reported in Question 12.)

- The total for the last row (row K, page 13) should match total federal sources reported in Question 1, row a.
- Examples of the disciplines included in each field are listed below.
- If an individual project involves more than one of the 36 fields of R&D, please prorate expenditures when possible and report the amount for each field involved.

R&D Fields	Federal departments and agencies [1]							
	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
A. ENGINEERING	(Dollars in thousands)							
1. Aeronautical/ Astronautical	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Bioengineering/ Biomedical eng.	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Chemical	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Civil	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. Electrical	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
6. Mechanical	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
7. Metallurgical/ Materials	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
8. Other engineering	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
9. TOTAL [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL

[1] **KEY:** USDA, Department of Agriculture; DoD, Department of Defense; Energy, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" includes all other federal agencies.

[2] Row and column totals are automatically generated on the web survey.

Examples of Disciplines: Engineering Fields of R&D

1. Aeronautical/ astronautical
- Aerodynamics
- Aerospace engineering
- Space technology

2. Bioengineering/biomedical engineering
- Biomaterials
- Medical engineering

3. Chemical
- Petroleum
- Petroleum refining process
- Plastics
- Polymer
- Wood science

4. Civil
- Architectural
- Architecture
- Environmental
- Environmental health
- Geotechnical
- Hydraulic
- Hydrologic
- Sanitary
- Structural
- Transportation

5. Electrical
- Communications
- Computer
- Electronics
- Power

6. Mechanical
- Engineering mechanics

7. Metallurgical/Materials
- Ceramic
- Materials science
- Metallurgy
- Mining and mineral
- Textile
- Welding

8. Other engineering
- Agricultural
- Engineering design

8. Other engineering (cont.)
- Engineering physics
- Engineering science
- Marine
- Naval architecture
- Nuclear
- Ocean
- Systems
- Other engineering fields not listed separately above

9. Total engineering
- Sum of entries in each column for rows A1 to A8

Question 9 continues on next page.

Question 9. (continued)

R&D Fields	Federal departments and agencies [1] (a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
B. PHYSICAL SCIENCES			**(Dollars in thousands)**					
1. Astronomy	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$TOTAL
2. Chemistry	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$TOTAL
3. Physics	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$TOTAL
4. Other physical sciences	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$TOTAL
5. **TOTAL** [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$TOTAL

[1] **KEY:** USDA, Department of Agriculture; DoD, Department of Defense; Energy, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" includes all other federal agencies.

[2] Row and column totals are automatically generated on the web survey.

Examples of Disciplines: Physical Sciences Fields of R&D

1. Astronomy

Astrophysics
Gamma-ray astronomy
Neutrino astronomy
Optical astronomy
Radio astronomy
X-ray astronomy

2. Chemistry
(except biochemistry—see Biological sciences)

Analytical chemistry
Inorganic chemistry
Organic chemistry
Organo-metallic chemistry
Pharmaceutical chemistry
Physical chemistry
Polymer sciences

3. Physics

Acoustics
Atomic physics
Chemical physics
Condensed matter physics
Elementary particle physics
Mathematical physics
Molecular physics
Nuclear structure
Optics
Plasma physics
Theoretical physics

4. Other physical sciences

Other physical sciences not listed separately above

5. Total for physical sciences
Sum of entries in each column for rows B1 to B4

Question 9 continues on next page.

Question 9. (continued)

R&D Fields	Federal departments and agencies [1] (a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
C. ENVIRONMENTAL SCIENCES	(Dollars in thousands)							
1. Atmospheric	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Earth sciences	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Oceanography	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other environ. sciences	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. TOTAL [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ _TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
D. MATHEMATICAL SCIENCES	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
E. COMPUTER SCIENCES	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL

[1] **KEY:** USDA, Department of Agriculture; DoD, Department of Defense; Energy, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" includes all other federal agencies.

[2] Row and column totals are automatically generated on the web survey.

Examples of Disciplines: Environmental Sciences, Mathematics, and Computer Science Fields of R&D

ENVIRONMENTAL SCIENCES

1. Atmospheric sciences

Aeronomy
Extraterrestrial atmospheres
Meteorology
Solar
Weather modification

ENVIRONMENTAL SCIENCES (CONTINUED)

2. Earth sciences

Cartography
Earth and planetary sciences
Geochemistry
Geodesy and gravity
Geology
Geomagnetism
Geophysics
Hydrology
Paleomagnetism
Paleontology
Physical geography

ENVIRONMENTAL SCIENCES (CONTINUED)

3. Oceanography

Biological oceanography
Chemical oceanography
Geological oceanography
Physical oceanography
Marine biology
Marine oceanography

4. Other earth, atmospheric, and ocean sciences

Other environmental

D. MATHEMATICAL SCIENCES

Algebra
Analysis
Applied mathematics
Foundations and logic
Geometry
Statistics
Numerical analysis
Operations research
Topology

E. COMPUTER SCIENCES

Computer systems analysis

	Earth and planetary sciences Seismology Surveying	sciences not listed separately above **5. Total for environmental sciences** Sum of entries in each column for rows C1 to C4	Data processing Information sciences Information technology Management information systems

Question 9 continues on next page.

Question 9. (continued)

Federal departments and agencies [1]

R&D Fields	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	**(h) TOTAL** [2]
F. LIFE SCIENCES	**(Dollars in thousands)**							
1. Agricultural	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Biological	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Medical	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other life sciences	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. **TOTAL** [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL

[1] **KEY:** USDA, Department of Agriculture; DoD, Department of Defense; Energy, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" includes all other federal agencies.

[2] Row and column totals are automatically generated on the web survey.

Examples of Disciplines: Life Sciences Fields of R&D

1. Agricultural sciences

- Agricultural chemistry
- Agricultural economics — see Social sciences, Economics
- Agricultural engineering — see Engineering
- Agricultural production
- Agronomy
- Animal science
- Aquaculture
- Conservation
- Fish and wildlife
- Forestry
- Horticulture
- International agriculture
- Landscape architecture
- Plant sciences
- Renewable natural resources
- Soil sciences

2. Biological sciences

- Allergies and immunology
- Anatomy
- Bacteriology
- Biochemistry
- Biogeography
- Biology, general
- Biometrics
- Botany
- Cellular biology
- Ecology
- Entomology
- Epidemiology
- Foods and nutrition studies
- Genetics, plant and animal
- Medical microbiology
- Immunology
- Microbiology
- Molecular biology
- Nutritional sciences
- Parasitology
- Pathology, human and animal
- Pharmacology, human and animal
- Physical anthropology
- Physiology, human and animal
- Toxicology
- Virology
- Zoology

3. Medical sciences

- Anesthesiology
- Cardiology
- Colon and rectal surgery
- Dentistry
- Dermatology
- Family medicine
- Gastroenterology
- General surgery
- Geriatric medicine
- Gynecology
- Hematology
- Internal medicine
- Mental Health
- Neonatal-perinatal medicine
- Neurological surgery
- Neurology
- Neurosciences
- Nuclear medicine
- Nuclear radiology
- Obstetrics
- Oncology
- Ophthalmology
- Optometry
- Oral surgery
- Orthopedic surgery
- Orthopedics
- Osteopathic medicine
- Otorhinolaryngology
- Pediatrics
- Pharmacology
- Psychiatric nursing
- Psychiatry
- Public health
- Radiation biology/ Radiobiology
- Thoracic surgery
- Urology
- Veterinary medicine

(See note below)

4. Other life sciences

- Gerontology
- Communication disorders sciences and services
- Health and medical administrative services
- Health professions and related services, other
- Clinical/medical laboratory technologies
- Nursing
- Occupational therapy
- Physical therapy
- Rehabilitation services
- Therapeutic services
- Other life sciences not listed separately above

Biophysics Biostatistics Biotechnology	Dental surgery	Pharmacy Physical and rehabilitative medicine Plastic surgery Podiatry Preventive medicine	**5. Total for life sciences** Sum of entries in each column for rows F1 to F4
	Note: Institutions should distribute veterinary R&D expenditures among the appropriate disciplines (e.g., agricultural, medical, and biological) rather than only in medical sciences.		

Question 9 continues on next page.

Question 9. (continued)

R&D Fields	Federal departments and agencies [1] (a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
	(Dollars in thousands)							
G. PSYCHOLOGY	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
H. SOCIAL SCIENCES								
1. Economics	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Political science	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Sociology	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other social sciences	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. **Total** [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
I. OTHER SCIENCES	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL

[1] **KEY:** USDA, Department of Agriculture; DoD, Department of Defense; Energy, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" includes all other federal agencies.

[2] Row and column totals are automatically generated on the web survey.

Examples of Disciplines: Psychology and Social Sciences Fields of R&D

G. PSYCHOLOGY

Animal behavior
Art therapy
Clinical psychology
Educational psychology
Experimental psychology
Human development and personality
School psychology
Social psychology

H. SOCIAL SCIENCES

1. Economics

Agricultural economics
Applied economics
Business development
Econometrics
Industrial economics
International economics
Labor economics
Managerial economics
Public finance and fiscal policy
Quantitative economics
Resource economics

SOCIAL SCIENCES (CONTINUED)

2. Political science

Comparative government
Government
International relations and affairs
Legal systems
Political theory
Public administration
Public policy analysis
Regional studies

3. Sociology

Anthropology (social and cultural only)
Comparative and historical sociology
Complex organizations
Cultural and social structure
Demography
Group interactions
Population studies
Social problems and welfare theory

SOCIAL SCIENCES (CONTINUED)

4. Other social sciences

Archaeology
Area and ethnic studies
City and community planning
Community services
Corrections
Criminal justice
Geography
History of science
Linguistics
Urban and regional planning
Urban affairs
Urban studies

5. Total for social sciences

Sum of entries in each column across rows H1 to H4

I. OTHER SCIENCES

Use this category when multidisciplinary, interdisciplinary, or other aspects make classification under one of the primary S&E fields (rows A to H) impossible

Question 9 continues on next page.

Question 9. (continued)

R&D Fields	Federal departments and agencies [1] (a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
J. NON-SCIENCE & ENGINEERING (NON S&E) FIELDS	**(Dollars in thousands)**							
1. Education	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Law	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Humanities	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Visual and performing arts	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. Business and management	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
6. Communication, journalism, and library science	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
7. Social work	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
8. Other non-S&E fields	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
9. **TOTAL** [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
K. TOTAL FOR ALL FIELDS OF R&D [2]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL

Total for row K, column h should equal Total for Question 1, row a.

[1] **KEY:** USDA, Department of Agriculture; DoD, Department of Defense; Energy, Department of Energy; HHS, Department of Health and Human Services; NASA, National Aeronautics and Space Administration; NSF, National Science Foundation. "Other" includes all other federal agencies.

[2] Row and column totals are automatically generated on the web survey.

Examples of Disciplines: Non-Science & Engineering (Non S&E) Fields of R&D			
1. Education	**Humanities** (continued)	**6. Communication, journalism,**	**9. Total for Non-S&E**

(no specific examples) **2. Law** Legal studies **3. Humanities** Foreign languages and literature English language and literature Letters Liberal arts and sciences General studies and humanities Philosophy and religion	Theological studies and religious vocations History (except history of science—see Other social sciences) **4. Visual and performing arts** (no specific examples) **5. Business and management** Business management and administrative services Marketing operations Marketing distribution	**and library science** Communication Library science Communications technologies **7. Social work** (no specific examples) **8. Other non-S&E fields** Parks, recreation, leisure and fitness studies Military technologies Other non S&E fields not listed separately above	Sum of entries in each column for rows 1 to J8 **K. TOTAL FOR ALL FIELDS OF R&D** Sum of all rows for Question 9. The total for row K, column h should equal the total for Question 1, row a

Question 10. Of the total R&D expenditures from "other" federal sources reported in Question 9 (row K, column g), which agencies funded this R&D and how much of the reported amount was from each agency?

- Please list agencies, from highest to lowest R&D expenditures amount, in rows a through k; use row l for any remaining amounts.

	Federal agency	R&D Expenditures (Dollars in thousands)
a.	_____	$_____
b.	_____	$_____
c.	_____	$_____
d.	_____	$_____
e.	_____	$_____
f.	_____	$_____
g.	_____	$_____
h.	_____	$_____
i.	_____	$_____
j.	_____	$_____
k.	_____	$_____
l.	Other agencies not listed above or in Question 9	$_____
m.	Total (should match Question 9, row K, column g.) [1]	$ TOTAL

[1] Row and column totals are automatically generated on the web survey.

Question 11. How much of the federal R&D expenditures amount reported in Question 9, row K, column h, took place in interdisciplinary research centers at your institution?

	R&D Expenditures (Dollars in thousands)
Total R&D expenditures from federal sources for projects in interdisciplinary research centers	$_____

Question 12. What were your FY 2009 R&D expenditures for the nonfederal sources below in each field of R&D?

- The total for each column in row K should match the corresponding sources reported in Question 1.
- If an individual project involves more than one of the 36 fields of R&D, please prorate expenditures when possible and report the amount for each field involved.

R&D Fields (See Question 9, pp. 8-9)	Nonfederal sources of funds (a) State and local government	(b) Industry	(c) Nonprofit orgs.	(d) Institutional funds	(e) Other nonfederal sources	(f) TOTAL [1]
A. ENGINEERING			**(Dollars in thousands)**			
1. Aeronautical/ Astronautical	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Bioengineering/ Biomedical eng.	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Chemical	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Civil	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. Electrical	$_____	$_____	$_____	$_____	$_____	$ TOTAL
6. Mechanical	$_____	$_____	$_____	$_____	$_____	$ TOTAL
7. Metallurgical/Materials	$_____	$_____	$_____	$_____	$_____	$ TOTAL
8. Other engineering	$_____	$_____	$_____	$_____	$_____	$ TOTAL
9. TOTAL [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
B. PHYSICAL SCIENCES						
1. Astronomy	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Chemistry	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Physics	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other physical sciences	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. TOTAL [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL

[1] Row and column totals are automatically generated on the web survey.

Question 12 continues on next page.

Question 12. (continued)

R&D Fields (See Question 9, pp. 10-12)	Nonfederal sources of funds (a) State and local government	(b) Industry	(c) Nonprofit orgs.	(d) Institutional funds	(e) Other nonfederal sources	(f) TOTAL [1]
	(Dollars in thousands)					
C. ENVIRONMENTAL SCIENCES						
1. Atmospheric	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Earth sciences	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Oceanography	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other environmental sciences	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
D. MATHEMATICAL SCIENCES	$_____	$_____	$_____	$_____	$_____	$ TOTAL
E. COMPUTER SCIENCES	$_____	$_____	$_____	$_____	$_____	$ TOTAL
F. LIFE SCIENCES						
1. Agricultural	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Biological	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Medical	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other life sciences	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
G. PSYCHOLOGY	$_____	$_____	$_____	$_____	$_____	$ TOTAL
H. SOCIAL SCIENCES						
1. Economics	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Political science	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Sociology	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other social sciences	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
I. OTHER SCIENCES	$_____	$_____	$_____	$_____	$_____	$ TOTAL

[1] Row and column totals are automatically generated on the web survey.

Question 12 continues on next page.

Question 12. (continued)

R&D Fields (See Question 9, p. 13)	Nonfederal sources of funds (a) State and local government	(b) Industry	(c) Nonprofit orgs.	(d) Institutional funds	(e) Other nonfederal sources	(f) TOTAL [1]
J. NON-SCIENCE & ENGINEERING (NON S&E) FIELDS			**(Dollars in thousands)**			
1. Education	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Law	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Humanities	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Visual and performing arts	$_____	$_____	$_____	$_____	$_____	$ TOTAL
5. Business and management	$_____	$_____	$_____	$_____	$_____	$ TOTAL
6. Communication, journalism, and library science	$_____	$_____	$_____	$_____	$_____	$ TOTAL
7. Social work	$_____	$_____	$_____	$_____	$_____	$ TOTAL
8. Other non-S&E fields	$_____	$_____	$_____	$_____	$_____	$ TOTAL
9. TOTAL [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL
K. TOTAL FOR ALL FIELDS OF R&D [1]	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL	$ TOTAL

Totals for row K, should match corresponding sources in Question 1, rows b-f.

[1] Row and column totals are automatically generated on the web survey.

Question 13. How much of the nonfederal R&D expenditures amount reported in Question 12, row K, column f, took place in interdisciplinary research centers at your institution?

	R&D Expenditures (Dollars in thousands)
Total R&D expenditures from nonfederal sources for projects in interdisciplinary research centers	$_____

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Question 14. Of the total amount of R&D expenditures reported in Question 1, row g, what were the amounts for the following types of costs?

- Please report **only direct costs** (including cost sharing) in rows a to f. Recovered and unrecovered **indirect costs** should be reported in rows g and h.

	R&D Expenditures (Dollars in thousands)
DIRECT COSTS FROM ALL SOURCES	
a. Salaries, wages, and fringe benefits—all compensation to full-time and part-time employees included in your R&D expenditures.	$_____
b. Software purchases—all payments for software. Include both purchases of software packages and license fees for systems.	
1. Noncapitalized software	$_____
2. Capitalized software	$_____
c. Capitalized equipment other than software reported in row b—payments for movable equipment exceeding your institution's capitalization threshold. Include ancillary costs such as delivery and set-up.	$_____
d. Pass-throughs to other universities or organizations (should match the total in Question 8, row c, column 3)	$_____
e. Other direct costs—other costs that do not fit into one of the above categories, including (but not limited to) travel, services such as consulting, computer usage fees, and supplies.	$_____
f. Total Direct Costs	$ TOTAL
INDIRECT COSTS	
g. Recovered indirect costs	$_____ (Confidential [1])
h. Unrecovered indirect costs (should equal Question 1, row e3)	$_____ (Confidential [1])
i. Total (should match total from Question 1, row g) [2]	$ TOTAL

[1] Information from confidential items is NOT published or released for individual institutions; only aggregate totals will appear in publications.

[2] Row and column totals are automatically generated on the web survey.

Question 15. At the end of FY 2009, what were your institution's dollar capitalization thresholds for software and equipment?

	(1) Software	(2) Equipment
Dollar threshold for capitalization	$_____	$_____

Question 16. For the fields of R&D below, what portion of your FY 2009 R&D expenditures went for the purchase of capitalized R&D equipment?

- Note that the total for Question 16 entered on row K, column c, should match Question 14, row c (capitalized equipment other than software).

R&D Fields (See Question 9, pp. 8-10)	R&D Expenditures (a) Federal	(b) Non-federal	(c) Total [1]
		(Dollars in thousands)	
A. ENGINEERING			
1. Aeronautical/Astronautical	$_____	$_____	$ TOTAL
2. Bioengineering/Biomedical eng.	$_____	$_____	$ TOTAL
3. Chemical	$_____	$_____	$ TOTAL
4. Civil	$_____	$_____	$ TOTAL
5. Electrical	$_____	$_____	$ TOTAL
6. Mechanical	$_____	$_____	$ TOTAL
7. Metallurgical/Materials	$_____	$_____	$ TOTAL
8. Other engineering	$_____	$_____	$ TOTAL
9. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL
B. PHYSICAL SCIENCES			
1. Astronomy	$_____	$_____	$ TOTAL
2. Chemistry	$_____	$_____	$ TOTAL
3. Physics	$_____	$_____	$ TOTAL
4. Other physical sciences	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL
C. ENVIRONMENTAL SCIENCES			
1. Atmospheric	$_____	$_____	$ TOTAL
2. Earth sciences	$_____	$_____	$ TOTAL
3. Oceanography	$_____	$_____	$ TOTAL
4. Other environmental sciences	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL

[1] Totals are automatically generated on the web survey.

Question 16 continues on next page.

Question 16 (continued)

R&D Fields (See Question 9, pp. 10-12)	R&D Expenditures (a) Federal	(b) Non-federal	(c) Total [1]
	(Dollars in thousands)		
D. MATHEMATICAL SCIENCES	$_____	$_____	$ TOTAL
E. COMPUTER SCIENCES	$_____	$_____	$ TOTAL
F. LIFE SCIENCES			
1. Agricultural	$_____	$_____	$ TOTAL
2. Biological	$_____	$_____	$ TOTAL
3. Medical	$_____	$_____	$ TOTAL
4. Other life sciences	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL
G. PSYCHOLOGY	$_____	$_____	$ TOTAL
H. SOCIAL SCIENCES			
1. Economics	$_____	$_____	$ TOTAL
2. Political science	$_____	$_____	$ TOTAL
3. Sociology	$_____	$_____	$ TOTAL
4. Other social sciences	$_____	$_____	$ TOTAL
5. **TOTAL** [1]	$ TOTAL	$ TOTAL	$ TOTAL
I. OTHER SCIENCES	$_____	$_____	$ TOTAL

[1] Totals are automatically generated on the web survey.

Question 16 continues on next page.

Question 16 (continued)

R&D Fields (See Question 9, p. 13)	R&D Expenditures (a) Federal	(b) Non-federal (Dollars in thousands)	(c) Total [1]
J. NON-SCIENCE & ENGINEERING (NON S&E) FIELDS			
1. Education	$_____	$_____	$ TOTAL
2. Law	$_____	$_____	$ TOTAL
3. Humanities	$_____	$_____	$ TOTAL
4. Visual and performing arts	$_____	$_____	$ TOTAL
5. Business and management	$_____	$_____	$ TOTAL
6. Communication, journalism, and library science	$_____	$_____	$ TOTAL
7. Social work	$_____	$_____	$ TOTAL
8. Other non-S&E fields	$_____	$_____	$ TOTAL
9. **TOTAL** [1]	$_____	$_____	$ TOTAL
K. TOTAL FOR ALL FIELDS OF R&D [1]	$ TOTAL	$ TOTAL	$ TOTAL

NOTE: Row K, column c, should match Question 14, row c (capitalized equipment other than software).
[1] Totals are automatically generated on the web survey.

Question 17. How many principal investigators and other personnel (headcount) were paid from the R&D salaries and wages you reported in Question 14, line a?

	(1) Principal investigators	(2) All other personnel	(3) Total [1]
Number of people (headcount)	_____	_____	TOTAL

[1] Totals are automatically generated on the web survey.

Question 18. Of the headcount reported in Question 17, column 3, how many are postdocs, that is, Ph.D. researchers working in temporary positions primarily for training in research?

Postdoc positions are designated as temporary positions for a defined period of time. Titles for postdocs can include postdoctoral researchers, postdoctoral fellows, research associates, etc.

Number of postdocs (headcount) _____

Question 19. How many R&D proposals were submitted by your institution to government agencies, foundations, or other funding sources outside of your institution in FY 2009? Include grant or contract proposals and other documents or actions that involved application for R&D funding.

	Number
Proposals submitted in FY 2009	_____

Question 20. What was the number and dollar value (in thousands) of R&D projects awarded to your institution in FY 2009?

In reporting the dollar value, provide the total amount awarded in FY 2009 for both new and ongoing projects. Please do not include contingent or optional renewal years if funds were not awarded in FY 2009.

	(1) Number	(2) Dollars (in thousands)
R&D projects awarded in FY 2009	_____	$_____

Question 20. How many of the R&D project awards reported in Question 20 involved interdisciplinary research? And, what was the dollar value (in thousands) of those awards?

Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice.

	(1) Number	(2) Dollars (in thousands)
Interdisciplinary R&D projects awarded in FY 2009	_____	$_____

Question 21. Of the total R&D awards reported in Question 20, how many were collaborative awards? What was the dollar value (in thousands) of these collaborative R&D awards?

Collaborative awards involve two or more higher education institutions, where each institution receives funding directly from the prime source. Please do not include awards for which your institution was a subrecipient of award funds or passed funds through to another institution.

	(1) Number	(2) Dollars (in thousands)
Collaborative R&D projects awarded in FY 2009	_____	$_____

Contact Information: Please complete the contact information for the person responsible for the survey and an alternate contact.

	Primary contact	Alternate contact
Name		
Title		
Street address		
City, state, and zip code		
Phone number		
Fax number		
Email address		

Please list the offices at your institution that were involved in completing your response to the survey.

Survey Completion Time: Approximately how long did it take to complete the questionnaire?

Completion time in hours

Fiscal Year: In what month did your institution's 2009 fiscal year begin?

Additional Comments: Please add any comments here.