NATIONAL SCIENCE FOUNDATION

ARLINGTON, VA 22230

HIGHER EDUCATION RESEARCH AND DEVELOPMENT SURVEY
FY 2009

Please submit your survey data by February 26, 2010.

This survey collects data on research and development (R&D) activities at higher education institutions. Please report R&D activities and expenditures for your institution's **2009** fiscal year.

The survey was previously known as the Survey of Research and Development Expenditures at Universities and Colleges. The next two pages summarize the changes from the FY 2008 survey and present updated instructions and definitions.

Your participation in this survey provides important information on the national level of R&D 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 institution will be treated equally in future governmental decisions whether you provide all, some, or none of the requested survey information.

QUESTIONS?

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Response to this 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.

The web address for submitting your data:

https://www.nsfherdsurvey.org

Or mail this form to:

ATTN: NSF HERD Survey
Westat
1600 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 page briefly describes the changes and additions.

Include all fields of R&D in all survey items

Please note that this revised questionnaire includes R&D in science and engineering (S&E) fields and in non-science and engineering (non-S&E) fields such as humanities, education, law, and the arts. R&D in both S&E and non-S&E fields is included in all survey items, beginning with Question 1 and continuing throughout the questionnaire. See question 9 for a complete listing of all fields of R&D. **Please note:** There are no changes to the fields of R&D nor to the listings of examples for each field.

Other general changes

- Two alternative listings show the discipline examples for each R&D field—1) sorted alphabetically, and 2) sorted by the CIP codes used by the U.S. Department of Education's National Center for Education Statistics (NCES). Find both lists under Survey Resources on the survey website.
- Clinical trials and research training grants are now explicitly 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. The "Industry" category has been renamed "Business."
- 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. Nonfederally 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

Fiscal year (FY)
Please report data for your institution's 2009 fiscal year.

Research and development (R&D)
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 nonfederal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).

Separately budgeted R&D
This includes all funds expended for activities specifically organized to produce R&D outcomes and commissioned by an organization 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 • R&D 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 • R&D 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 units of your institution included in or with your financial statements, such as:
  ○ Agricultural experiment stations
  ○ Branch campuses
  ○ Medical schools
  ○ Hospitals or clinics
  ○ Research centers and facilities
  ○ A university 501(c)3 foundation established to handle R&D awards.
	• Federally funded R&D centers (FFRDCs). This information is collected separately. See the list of FFRDCs: http://www.nsf.gov/statistics/ffrdc/
	• 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 S&E and non-S&E 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. Business Domestic or foreign for-profit organizations. (Report funds from a company's nonprofit foundation in row d.)	$_____
d. Nonprofit organizations Domestic or foreign 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. In accordance with the National Science Foundation Act of 1950, as amended, and other applicable federal laws, your responses will not be disclosed in identifiable form to anyone other than agency employees or authorized persons.

[2] Column totals are automatically generated on the web survey.

Question 2. How much of the total R&D expenditures reported in Question 1 came from foreign sources?

- Foreign sources include foreign governments, businesses, 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?

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

	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]
Total R&D expenditures for clinical trials	$_____	$_____	$ TOTAL

[1] The row total is automatically generated on the web survey.

Question 4.1. **Did you include R&D expenditures for (a) human clinical trials, or (b) veterinary clinical trials in your FY 2008 (previous year's) survey response?**

Check one for each row.

	Included	Not included	No FY 2008 clinical trials
a. Human clinical trials	☐	☐	☐
b. Veterinary clinical trials	☐	☐	☐

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 [1] (should match Question 1, row g minus Question 1, row e4)	$ TOTAL

[1] The column total is 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.

See the box below this question for examples.

	R&D expenditures (Dollars in thousands) (1) Federal	(2) Nonfederal	(3) Total [1]
a. Basic research Research undertaken primarily to acquire new knowledge without any particular application or use in mind.	$_____	$_____	$ TOTAL
b. Applied research Research conducted to gain the knowledge or understanding to meet a specific, recognized need.	$_____	$_____	$ TOTAL
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.	$_____	$_____	$ TOTAL
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.

Examples		
Basic research	**Applied research**	**Development**
A researcher is studying the properties of human blood to determine what affects coagulation.	A researcher is conducting research on how a new chicken pox vaccine affects blood coagulation.	A researcher is conducting clinical trials to test a newly developed chicken pox vaccine for young children.
A researcher is studying the properties of molecules under various heat and cold conditions.	A researcher is investigating the properties of particular substances under various heat and cold conditions with the objective of finding longer lasting components for highway pavement.	A researcher is working with state transportation officials to conduct tests of a newly developed highway pavement under various types of heat and cold conditions.
A researcher is studying the heart chambers of various fish species.	A researcher is examining various levels of a toxic substance to determine the maximum safe level for fish in a stream.	A researcher has a contract with the U.S. government to design a new stream monitoring system that will incorporate the latest research findings on toxicity levels for fish.

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 (Dollars in thousands) (1) Federal	(2) Nonfederal	(3) Total [1]
a. From higher education institutions 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 (Dollars in thousands) (1) Federal	(2) Nonfederal	(3) Total [1]
a. To higher education institutions 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 9A. What were your FY 2009 R&D expenditures in engineering funded by the federal agency sources below? (R&D expenditures from nonfederal sources will be reported in Question 12.)

- The total for the last row (row K, page 14) 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 expenditures from federal sources [1]
(Dollars in thousands)

R&D Fields	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
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 [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

A. ENGINEERING

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
Engineering physics
Engineering science
Marine
Naval architecture
Nuclear
Ocean
Systems
Other engineering fields not listed separately above

Question 9 continues on next page.

Question 9B. What were your FY 2009 R&D expenditures in the physical sciences funded by the federal agency sources below? (R&D expenditures from nonfederal sources will be reported in Question 12.)
(continued)

R&D expenditures from federal sources[1]
(Dollars in thousands)

R&D Fields	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
B. PHYSICAL SCIENCES								
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

B. PHYSICAL SCIENCES

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

Question 9 continues on next page.

Question 9C-E. (continued) **What were your FY 2009 R&D expenditures in the environmental, mathematical, and computer sciences funded by the federal agency sources below? (R&D expenditures from nonfederal sources will be reported in Question 12.)**

R&D expenditures from federal sources[1]
(Dollars in thousands)

R&D Fields	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
C. ENVIRONMENTAL SCIENCES								
1. Atmospheric	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
2. Earth sciences	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
3. Oceanography	$_____	$_____	$_____	$_____	$_____	$_____	$_____	$ TOTAL
4. Other environmental 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, Mathematical Sciences, and Computer Sciences Fields of R&D

C. ENVIRONMENTAL SCIENCES

1. Atmospheric sciences

Aeronomy
Extraterrestrial atmospheres
Meteorology
Solar
Weather modification

C. ENVIRONMENTAL SCIENCES (CONTINUED)

2. Earth sciences

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

C. ENVIRONMENTAL SCIENCES (CONTINUED)

3. Oceanography

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

4. Other environmental sciences

Other environmental sciences not listed separately above

D. MATHEMATICAL SCIENCES

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

E. COMPUTER SCIENCES

Computer systems analysis
Data processing
Information sciences
Information technology
Management information systems

Question 9 continues on next page.

Question 9F. (continued) **What were your FY 2009 R&D expenditures in the life sciences funded by the federal agency sources below? (R&D expenditures from nonfederal sources will be reported in Question 12.)**

R&D expenditures from federal sources[1]
(Dollars in thousands)

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								
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

F. LIFE SCIENCES

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
Biophysics
Biostatistics
Biotechnology

Biological sciences (CONTINUED)

Botany
Cellular biology
Ecology
Entomology
Epidemiology
Foods and nutrition studies
Genetics, plant and animal
Immunology
Medical microbiology
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
Dental surgery
Dentistry
Dermatology

Medical sciences (CONTINUED)

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
Pharmacy
Physical and rehabilitative medicine
Plastic surgery
Podiatry
Preventive medicine

Medical sciences (CONTINUED)

Psychiatric nursing
Psychiatry
Public health
Radiation biology/ Radiobiology
Thoracic surgery
Urology
Veterinary medicine — see note below

4. Other life sciences

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

Note: Please report veterinary R&D expenditures using agricultural sciences, medical sciences, and biological sciences, as appropriate.

Question 9 continues on next page.

Question 9G-I. (continued) **What were your FY 2009 R&D expenditures in psychology, social sciences, and other sciences funded by the federal agency sources below? (R&D expenditures from nonfederal sources will be reported in Question 12.)**

R&D expenditures from federal sources[1]
(Dollars in thousands)

R&D Fields	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL[2]
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

H. 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

H. 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

I. OTHER SCIENCES

Use this category for R&D that involves at least one S&E field (rows A to H) if it is impossible to report multidisciplinary or interdisciplinary R&D expenditures in specific fields.

Question 9 continues on next page.

Question 9J-K. (continued) **What were your FY 2009 R&D expenditures in the non-science and engineering (non-S&E) fields funded by the federal agency sources below? (R&D expenditures from nonfederal sources will be reported in Question 12.)**

R&D expenditures from federal sources[1]
(Dollars in thousands)

R&D Fields	(a) USDA	(b) DoD	(c) Energy	(d) HHS, includes NIH	(e) NASA	(f) NSF	(g) Other	(h) TOTAL [2]
J. 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** [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

J. NON-S&E

1. Education
(no specific examples)

2. Law
Legal studies

3. Humanities
English language and literature
Foreign languages and literature
History (except history of science—see Other social sciences)
Letters
Liberal arts and sciences

Humanities (continued)
General studies and humanities
Philosophy and religion
Theological studies and religious vocations

4. Visual and performing arts
(no specific examples)

5. Business and management
Business management and administrative services
Marketing distribution
Marketing operations

6. Communication, journalism, and library science
Communication
Communications technologies
Library science

7. Social work
(no specific examples)

8. Other non-S&E fields
Military technologies
Parks, recreation, leisure and fitness studies
Other non-S&E fields not listed separately above
Also, use this category for R&D that involves multiple non-S&E fields if it is impossible to report multidisciplinary or interdisciplinary R&D expenditures in specific fields

Question 10. Of the amount reported for "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 up to 10 agencies that fund the highest R&D expenditures.
- Use row k to provide the amount for any remaining agencies.

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

[1] The column total is 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 12A-B. What were your FY 2009 R&D expenditures in the engineering and physical sciences fields funded by the nonfederal sources below?

- The totals in row K, page 18, should match corresponding sources in Question 1, rows b-f.
- 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 expenditures from nonfederal sources
(Dollars in thousands)

R&D Fields (See Question 9, pp. 9-10)	(a) State and local government	(b) Business	(c) Nonprofit organizations	(d) Institutional funds	(e) Other nonfederal sources	(f) TOTAL [1]
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	$ 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.

Examples of disciplines for engineering and physical sciences fields of R&D are listed on page 9-10.

Question 12 continues on next page.

Question 12C-I. What were your FY 2009 R&D expenditures in the R&D fields listed below funded by the nonfederal sources below? (continued)

R&D expenditures from nonfederal sources
(Dollars in thousands)

R&D Fields (See Question 9, pp. 11-13)	(a) State and local government	(b) Business	(c) Nonprofit organizations	(d) Institutional funds	(e) Other nonfederal sources	(f) TOTAL [1]
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.

Examples of disciplines for the above fields of R&D are listed on pages 11-13.

Question 12 continues on next page.

Question 12J-K. What were your FY 2009 R&D expenditures in the non-science and engineering (non-S&E) fields funded by the nonfederal sources below?
(continued)

R&D expenditures from nonfederal sources
(Dollars in thousands)

R&D Fields (See Question 9, p. 14)	**(a) State and local government**	**(b) Business**	**(c) Nonprofit organizations**	**(d) Institutional funds**	**(e) Other nonfederal sources**	**(f) TOTAL** [1]
J. 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	$ 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.

Examples of disciplines for non-S&E fields of R&D are listed on page 14.

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	$_____

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

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

DIRECT COSTS FROM ALL SOURCES	R&D expenditures (Dollars in thousands)
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.	$_____
INDIRECT COSTS	
f. Recovered indirect costs	$_____ (Confidential [1])
g. Unrecovered indirect costs (should equal Question 1, row e3)	$_____ (Confidential [1])
h. 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. In accordance with the National Science Foundation Act of 1950, as amended, and other applicable federal laws, your responses will not be disclosed in identifiable form to anyone other than agency employees or authorized persons.

[2] The column total is automatically generated on the web survey.

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

	Dollars in thousands	
	(1) Software	(2) Equipment
Capitalization thresholds	$_____	$_____

Question 16A-C. 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?

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. 9-11)	R&D equipment expenditures (Dollars in thousands) (a) Federal	(b) Nonfederal	(c) Total [1]
A. ENGINEERING			
1. Aeronautical/Astronautical	$_____	$_____	$ TOTAL
2. Bioengineering/Biomedical engineering	$_____	$_____	$ 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] Row and column totals are automatically generated on the web survey.

Examples of disciplines for the above fields of R&D are listed on pages 11-13.

Question 16 continues on next page.

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

R&D Fields (See Question 9, pp. 11-13)	R&D equipment expenditures (Dollars in thousands) (a) Federal	(b) Nonfederal	(c) Total [1]
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] Row and column totals are automatically generated on the web survey.

Examples of disciplines for the above fields of R&D are listed on pages 11-13.

Question 16 continues on next page.

Question 16J-K. (continued) **For the non-science and engineering (non-S&E) fields of R&D below, what portion of your FY 2009 R&D expenditures went for the purchase of capitalized R&D equipment?**

R&D Fields (See Question 9, p. 14)	R&D equipment expenditures (Dollars in thousands) (a) Federal	(b) Nonfederal	(c) Total [1]
J. 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

Total for row K, column c, should match Question 14, row c (capitalized equipment other than software).

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

Examples of disciplines for non-S&E fields of R&D are listed on page 14.

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

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

[1] The row total is 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 people (headcount) _____

Question 19. How many R&D proposals (S&E and non-S&E) were submitted by your institution to government agencies, foundations, or other funding sources outside of your institution in FY 2009? Include proposals for grants and contracts and any other documents or actions that were used to apply for R&D funding.

Number of proposals submitted _____

Question 20. How many R&D projects in both science and engineering (S&E) and non-S&E fields were AWARDED to your institution in FY 2009 from the sources below and what were their dollar amounts?

- Include only awards for research. Do not include awards for instruction, outreach, public service, or other sponsored activities.
- Include the total amount awarded in FY 2009, even if the funds will be spent over multiple years. For example, if your institution receives an award of $5,000,000 that will be spent over five years, report $5,000,000.
- The total amount of the award should be reported by the prime award recipient. Exclude subawards your institution received as a subrecipient.

Source of R&D Funds	(1) Number of R&D awards	(2) Total R&D dollars awarded (in thousands)
a. Federal stimulus funds (American Recovery and Reinvestment Act, or ARRA)	_____	_____
b. Other federal funds	_____	_____
c. Nonfederal funds	_____	_____
d. Total [1]	TOTAL	TOTAL

[1] The column total is automatically generated on the web survey.

Question 21. How many of the R&D project awards reported in Question 20 involved interdisciplinary R&D and what was their dollar amount?

Interdisciplinary R&D is a mode of R&D 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 R&D practice.

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

Question 22. Of the total R&D awards reported in Question 20, how many were collaborative awards with other academic institutions and what was their dollar amount?

- **Collaborative awards with other academic institutions** involve two or more higher education institutions, where each institution receives funding directly from the prime source.
- **Exclude** subrecipient awards—for example, awards for which your institution was a subrecipient of funds or passed funds through to another institution.

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

Question 23.

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

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

B. Survey completion time by office: Please list the offices at your institution that were involved in completing your response to the survey. For each office, please indicate the survey completion time in hours for:

(1) setting up new systems or programs required to respond, and

(2) preparing your response once those new systems or programs were in place.

Offices involved in responding	Completion time in hours (1) For new systems/programs	Completion time in hours (2) For response preparation

C. Fiscal year: In what month did your institution's 2009 fiscal year end?

D. Additional comments: