Please submit your survey data by January 31, 2013.

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 2012 fiscal year.

Your participation in this survey provides important information on the national level of R&D activity. The National Science Foundation (NSF) is authorized to collect this information under the National Science Foundation Act of 1950, as amended. Your institution’s response is entirely voluntary.

Questions?

Ronda Britt
National Center for Science and Engineering Statistics
National Science Foundation
rbritt@nsf.gov
(703) 292-7765

Response to this survey is estimated to require 14 hours. Please report your actual completion time at the end of the questionnaire. If you wish to comment on the time required to complete this survey, please contact Suzanne H. Plimpton of NSF at (703) 292-7556, or e-mail splimpto@nsf.gov.

The Web address for submitting your data:
http://www.herdsurvey.org

Or mail this form to:
ICF International
530 Gaither Road, Suite 500
Rockville, MD 20850

Thank you for your participation.
What’s New for FY 2012

Reduction in questions

NSF received many inquiries from institutions during the FY 2011 survey regarding the possibility of completing a subset of questions for the survey. We recognize that for institutions with small amounts of R&D expenditures, completing the full survey is burdensome and not directly relevant to their institution’s primary mission. Therefore, we have instituted a short form version of the survey that includes only a few core questions for institutions below a designated threshold of R&D expenditures.

Changes to survey definitions and instructions

In order to continue to provide greater clarity regarding what types of institutionally funded activities should be included, we have modified the instructions in several places on page 3. These revisions are not meant to be changes to the survey definitions; however, we recognize that some institutions will need to revise their reporting as a result of these modified instructions. A new question was added (see below) in order to account for the changes made this year.

- The definition of R&D expenditures has been revised to include all expenditures for R&D from your institution’s current operating funds that can be separately accounted for. This includes projects that are separately budgeted and fall under OMB’s A-21 definition of organized research, as well as expenditures of other funds designated for research.
- In the box labeled “R&D includes”, three additional bullets were added: startup, bridge, or seed funding provided to researchers within your institution; other departmental funds designated for research; and tuition remission provided to students working on research.
- In the box labeled “R&D does not include”, one bullet was revised to reduce ambiguity. It was changed from “departmental research that is not separately budgeted” to “estimates of the proportion of time budgeted for instruction that is spent on research.”
- In the box labeled “Please include these components of your institution”, the “university 501(c)3 foundation” bullet has been revised to include all university 501(c)3 foundations, not just those established to handle R&D awards.

Changes to questions

- Question 1. Row d, Nonprofit organizations. An instruction has been added to specify that funds from your institution’s 501(c)3 foundation be reported in row e1 (institutionally financed research).
- Question 1. Row e1, Institutionally financed research, has been clarified to include both organized research and separately accounted for departmental research.
- Question 1. Row e3, Unrecovered indirect costs. The wording has been modified to emphasize that only your externally funded R&D should be used to calculate these costs.

New question

- Question 1.1. This question asks if four different types of institutionally financed R&D expenditures were included in Question 1, row e1, both on the current FY 2012 survey and on the FY 2011 survey.
## Survey Definitions and Instructions

**Fiscal year (FY)**
Please report data for your institution’s 2012 fiscal year.

**Research and development (R&D)** is creative work conducted systematically to increase the stock of knowledge (research) and to use this stock of knowledge to devise new applications (development). R&D covers three activities defined below—basic research, applied research, and development.

- **Basic research** is undertaken primarily to acquire new knowledge without any particular application or use in mind.
- **Applied research** is conducted to gain the knowledge or understanding to meet a specific, recognized need.
- **Development** is 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.

**R&D expenditures**
Include all R&D expenditures from your institution’s current operating funds that are separately accounted for. For purposes of this survey, R&D includes expenditures for organized research as defined by 2 CFR 220 (OMB Circular A-21) and expenditures from funds designated for research.

### R&D includes:
- Sponsored research (federal and nonfederal)
- University research (institutional funds that are separately budgeted for individual R&D projects)
- Startup, bridge, or seed funding provided to researchers within your institution
- Other departmental funds designated for research
- Recovered and unrecovered indirect costs (see definitions in Question 1)
- Equipment purchased from R&D project accounts
- R&D funds passed through to a subrecipient organization, educational or other
- Clinical trials, Phases I, II, or III (see definition in Question 5)
- Research training grants funding work on organized research projects
- Tuition remission provided to students working on research

### R&D does not include:
- Public service grants or outreach programs
- Curriculum development (unless included as part of an overall research project)
- R&D conducted by university faculty or staff at outside institutions that is not accounted for in your financial records
- Estimates of the proportion of time budgeted for instruction that is spent on research
- Capital projects (i.e., construction or renovation of research facilities)
- Non-research training grants
- Unrecovered indirect costs that exceed your institution’s federally negotiated Facilities and Administrative (F&A) rate

**Please include** these components of your institution:
- 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

**Please do not include:**
- Federally Funded R&D Centers (FFRDCs). This information is collected separately. See the list of FFRDCs: [http://www.nsf.gov/statistics/ffrdc/](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.
- Other campuses headed by their own presidents or chancellors within your university system. Each campus is asked to respond separately.
Question 1. How much of your total expenditures for research and development (R&D) came from the following sources in FY 2012? (See definition of R&D on the previous page.)

- In rows a, b, c, d, and f: Include both direct and recovered indirect costs (reimbursement of F&A costs from external sponsors).
- Report the original source of funds, when possible.
- Include all fields of R&D (e.g., sciences, engineering, humanities, education, law, arts). See full listing in Question 9.

<table>
<thead>
<tr>
<th>Source of funds</th>
<th>R&amp;D expenditures <em>(Dollars in thousands)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. U.S. federal government</strong></td>
<td>$_________</td>
</tr>
<tr>
<td>Any agency of the United States government. Include federal funds passed through from another institution.</td>
<td></td>
</tr>
<tr>
<td><strong>b. State and local government</strong></td>
<td>$_________</td>
</tr>
<tr>
<td>Any state, county, municipality, or other local government entity in the United States, including state health agencies. Include state funds that support R&amp;D at agricultural and other experiment stations. Public institutions should report state appropriations restricted for R&amp;D activities here rather than in row e, Institutional funds.</td>
<td></td>
</tr>
<tr>
<td><strong>c. Business</strong></td>
<td>$_________</td>
</tr>
<tr>
<td>Domestic or foreign for-profit organizations. Report funds from a company's nonprofit foundation in row d.</td>
<td></td>
</tr>
<tr>
<td><strong>d. Nonprofit organizations</strong></td>
<td>$_________</td>
</tr>
<tr>
<td>Domestic or foreign nonprofit foundations and organizations. Report funds from your institution's 501(c)3 foundation in row e1.</td>
<td></td>
</tr>
<tr>
<td><strong>e. Institutional funds</strong></td>
<td></td>
</tr>
<tr>
<td>1. Institutionally financed research</td>
<td>$_________</td>
</tr>
<tr>
<td>All R&amp;D funded by your institution, including both organized research and separately accounted for departmental research.</td>
<td></td>
</tr>
<tr>
<td>2. Cost sharing</td>
<td>$_________</td>
</tr>
<tr>
<td>Include committed cost sharing other than unrecovered indirect costs. Report unrecovered indirect costs in row e3.</td>
<td></td>
</tr>
<tr>
<td>3. Unrecovered indirect costs</td>
<td>$_________</td>
</tr>
<tr>
<td>Calculate this amount as follows for your externally funded R&amp;D only (preferably on a project-specific basis) using the appropriate cost rate—on-campus, off-campus, etc.</td>
<td></td>
</tr>
<tr>
<td>• First, multiply the negotiated rate by the corresponding base.</td>
<td></td>
</tr>
<tr>
<td>• Second, subtract recovered indirect costs.</td>
<td></td>
</tr>
<tr>
<td>4. Total institutional funds²</td>
<td>$TOTAL</td>
</tr>
<tr>
<td><strong>f. All other sources</strong></td>
<td>$_________</td>
</tr>
<tr>
<td>Other sources not reported above, such as funds from foreign governments.</td>
<td></td>
</tr>
<tr>
<td><strong>g. Total²</strong></td>
<td>$TOTAL</td>
</tr>
</tbody>
</table>

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 Totals for rows e4 and g are automatically generated on the Web survey.
**Question 1.1. Did you include the following types of funding in your response to Question 1, row e1?**

<table>
<thead>
<tr>
<th>Category</th>
<th>Included in Question 1e1 this year (FY 2012)</th>
<th>Included in Question 1e1 in previous year (FY 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Competitively awarded internal grants for research</strong></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Expenditures for organized research projects, involving a proposal or statement of work with expected research outcomes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>b. Startup packages/bridge funding/seed funding</strong></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Expenditures from funds provided to faculty members to begin or continue their research while seeking external sponsors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>c. Other departmental funds designated for research</strong></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Expenditures for research from other departmental or central accounts which do not match the descriptions provided in rows a or b.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>d. Tuition assistance for student research personnel</strong></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>University tuition assistance, waivers, or remission provided to students working on organized research. Please check “included in Question 1e1” even if these funds are reported as part of the expenditures included under rows a, b, or c.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 2. What were your FY 2012 R&D expenditures in the fields below? Please report federally funded expenditures in column (a) and all other expenditures in column (b).

- Examples of the disciplines included under each field are provided on pages 7–9.

<table>
<thead>
<tr>
<th>R&amp;D Fields</th>
<th>(a) Federal</th>
<th>(b) Nonfederal</th>
<th>(c) Total¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Computer Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>2. Engineering</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>3. Environmental Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>4. Life Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>5. Mathematical Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>6. Physical Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>7. Psychology</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>8. Social Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>9. Other Sciences</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>10. Non-S&amp;E fields</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
<tr>
<td>11. Total for All Fields of R&amp;D¹</td>
<td>$ TOTAL</td>
<td>$ TOTAL</td>
<td>$ TOTAL</td>
</tr>
</tbody>
</table>

Total in row 11, column (a) should match total reported in Question 1, row a.
Total in row 11, column (b) should match total reported in Question 1, rows b–f.

¹ Row and column totals are automatically generated on the Web survey.
**Question 3.** How much of your R&D expenditures reported in Question 1 did your institution receive as a subrecipient from another U.S. university or college?

Please report the original source of funds in columns (a) and (b).

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. Subrecipients tend to be the co-authors of publications, writers of technical reports discussing findings, inventors, etc. Do not include vendor relationships. A vendor receives payment for goods and services provided. See OMB Circular A-133, Section 210.

<table>
<thead>
<tr>
<th>Originating source of R&amp;D expenditures (Dollars in thousands)</th>
<th>(a) Federal</th>
<th>(b) Nonfederal</th>
<th>(c) Total¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds received from other U.S. higher education institutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Include colleges and universities and units owned, operated, and controlled by such institutions.</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
</tbody>
</table>

**Question 4.** How much of the R&D expenditures reported in Question 1 did your institution pass through to subrecipients at other U.S. universities or colleges?

Please report the original source of funds in columns (a) and (b).

<table>
<thead>
<tr>
<th>Originating source of R&amp;D expenditures (Dollars in thousands)</th>
<th>(a) Federal</th>
<th>(b) Nonfederal</th>
<th>(c) Total¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds passed through to other U.S. higher education institutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Include colleges and universities and units owned, operated, and controlled by such institutions.</td>
<td>$__________</td>
<td>$__________</td>
<td>$ TOTAL</td>
</tr>
</tbody>
</table>

¹ Row and column totals are automatically generated on the Web survey.
**Question 5.**

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

<table>
<thead>
<tr>
<th></th>
<th>Primary contact</th>
<th>Alternate contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building/department</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street address (line 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street address (line 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City, state, and ZIP code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fax number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mail address</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B. Fiscal year:** In what month did your institution’s 2012 fiscal year end?  

**C. Survey completion time:** Considering all offices involved, approximately how long did it take to complete this survey? ______ hours

**D. Additional comments:**

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________
## EXAMPLES OF DISCIPLINES UNDER EACH R&D FIELD

### 1. Computer Sciences
- Computer systems analysis
- Data processing
- Information sciences
- Information technology
- Management information systems

### 2. Engineering
- **Aeronautical/Astronautical**
  - Aerodynamics
  - Aerospace engineering
  - Space technology
- **Bioengineering/Biomedical engineering**
  - Biomaterials
  - Medical engineering
- **Chemical**
  - Petroleum
  - Petroleum refining process
  - Plastics
  - Polymer
  - Wood science
- **Civil**
  - Architectural
  - Architecture
  - Environmental
  - Environmental health
  - Geotechnical
  - Hydraulic
  - Hydrologic
  - Sanitary
  - Structural
  - Transportation
- **Electrical**
  - Communications
  - Computer
  - Electronics
  - Power
- **Mechanical**
  - Engineering mechanics
- **Metallurgical/Materials**
  - Ceramic
  - Materials science
  - Metallurgy
  - Mining and mineral
  - Textile
  - Welding
- **Other engineering**
  - Agricultural
  - Engineering design
  - Engineering physics
  - Engineering science
  - Marine
  - Naval architecture
  - Nuclear
  - Ocean
  - Systems

### 3. Environmental Sciences
- **Atmospheric sciences**
  - Aeronomy
  - Extraterrestrial atmospheres
  - Meteorology
  - Solar
  - Weather modification
- **Earth sciences**
  - Cartography
  - Earth and planetary sciences
  - Geochemistry
  - Geodesy and gravity
  - Geology
  - Geomagnetism
  - Geophysics
  - Hydrology
  - Paleomagnetism
  - Paleontology
  - Physical geography
  - Seismology
  - Surveying
- **Oceanography**
  - Biological oceanography
  - Chemical oceanography
  - Geological oceanography
  - Marine biology
  - Marine oceanography
  - Physical oceanography

*Examples of disciplines continue on next page.*
4. Life Sciences

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

Biological sciences
- Allergies and immunology
- Anatomy
- Bacteriology
- Biochemistry
- Biogeography
- Biology, general
- Biometrics
- Biophysics
- Biostatistics
- Biotechnology
- 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

Medical sciences
- Anesthesiology
- Cardiology
- Colon and rectal surgery
- Dental 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
- Otolaryngology
- Pediatrics
- Pharmacology
- Pharmacy
- Physical and rehabilitative medicine
- Plastic surgery
- Podiatry

5. Mathematical Sciences

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

6. Physical Sciences

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

Chemistry
- Analytical chemistry
- Inorganic chemistry
- Organic chemistry
- Organometallic chemistry
- Pharmaceutical chemistry
- Physical chemistry
- Polymer sciences
- Except biochemistry—report in Biological sciences

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

7. Psychology

- Animal behavior
- Art therapy
- Clinical psychology
- Educational psychology
- Experimental psychology
- Human development and personality
- School psychology
- Social psychology
### 8. Social Sciences

**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  

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

**Sociology**  
- Anthropology, cultural and social  
- Anthropology, physical—report in Life Sciences  
- Comparative and historical sociology  
- Complex organizations  
- Cultural and social structure  
- Demography  
- Group interactions  
- Population studies  
- Social problems and welfare theory  

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

### 9. Other Sciences

Use this category for R&D that involves at least one S&E field (fields 1–8) if it is impossible to report multidisciplinary or interdisciplinary R&D expenditures in specific fields.

### 10. Non-S&E Fields

**Business and management**  
- Business management and administrative services  
- Marketing distribution  
- Marketing operations  

**Communication, journalism, and library science**  
- Communication  
- Communications technologies  
- Library science  

**Education**  

**Humanities**  
- English language and literature  
- Foreign languages and literature  
- General studies and humanities  
- History (except history of science—report in Social sciences)  
- Letters  
- Liberal arts and sciences  
- Philosophy and religion  
- Theological studies and religious vocations  

**Law**  
- Legal studies  

**Social work**  

**Visual and performing arts**  

**Other non-S&E fields**  
- Military technologies  
- Parks, recreation, leisure and fitness studies  
- Other non-S&E fields that cannot be classified using the fields listed above