

# Measuring Research and Development at Colleges and Universities in the United States



## The Higher Education Research and Development Survey

Higher education institutions in the United States serve as a key component to the U.S. R&D system, helping drive innovation, as well as scientific and technological breakthroughs. R&D activity and funding can demonstrate the United States' investment in expanding knowledge and economic growth.

## What is the HERD Survey?

The Higher Education Research and Development (HERD) Survey collects information from U.S. colleges and universities that have spent at least \$150,000 for R&D that has been separately accounted for in the past fiscal year. It is conducted by the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation.

## How can I use the HERD Survey?

Data from the HERD Survey can answer questions like

- Who funds university R&D?
- Which federal agencies fund R&D at higher education institutions?
- Where has there been the most growth in R&D?
- Which R&D fields have the highest expenditures?
- How much did minority-serving institutions spend on R&D?

## Why is the HERD Survey important?

The HERD Survey is the primary source of information on R&D expenditures within higher education institutions in the United States, and it collects information from over 900 institutions annually.

For more information, the [HERD Survey homepage](https://nsf.gov/statistics/srvyherd) (<https://nsf.gov/statistics/srvyherd>) features additional details about the survey, its questionnaires, and links to related publications and products.



## Data details

### Where can I find HERD Survey data?

HERD Survey data can be found in several places throughout the NCSSES website. The [HERD Survey data page](https://nsf.gov/statistics/srvyherd/#tabs-2) (<https://nsf.gov/statistics/srvyherd/#tabs-2>) offers data tables and access to public use microdata (at the institution level). NCSSES's interactive [data tools](https://ncsesdata.nsf.gov) (<https://ncsesdata.nsf.gov>) allow users to explore HERD Survey data and to build charts and tables tailored to their unique research interests.

### U.S. academic institutions report information such as

#### R&D expenditures

- By field and source of funds, including foreign sources
- Within medical schools
- For clinical trials
- By type of R&D
  - Basic research
  - Applied research
  - Experimental development
- Federally funded, by field and federal agency
- By cost categories
- Total and federally funded R&D equipment expenditures by field

#### Headcounts and full-time equivalents of R&D personnel functions

#### Institutional characteristics

#### Geographic location within the United States



## Products supported by HERD Survey data

HERD Survey data are used in NCSSES publications, such as InfoBriefs, special reports, and working papers. Its data are also used to determine Carnegie Classification of higher education institutions and to supplement NCSSES publications, such as National Patterns of R&D Resources, Science and Engineering State Profiles, and *Science and Engineering Indicators*.

### Survey specifics

**Frequency:** Annual

**Initial survey year:** 2010 (replacing previous Academic R&D Expenditures Survey, which was conducted from FY 1972 through FY 2009)

**Reference period:** The academic fiscal year

**Response unit:** Academic institutions with at least \$150,000 spending on R&D in the previous year

**Sample or census:** Census

**Population size:** Approximately 915 institutions

**Sample size:** The survey is a census of all known eligible universities and colleges



### National Center for Science and Engineering Statistics (NCSSES)

For more information about NCSSES's products and data collection process, visit <https://ncses.nsf.gov>. You can also explore our Surveys page at <https://ncses.nsf.gov/surveys> to learn more about NCSSES surveys and the HERD Survey, as well as its methodology, survey design, and questionnaires.