

## **Guide to Public-Use Data Files**

### **Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2019**

The Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) collects count data for graduate students (separately for master’s and doctoral students), postdoctoral appointees (postdocs), and doctorate-holding nonfaculty researchers (NFRs) in science, engineering, and selected health units.

Graduate student counts are collected by enrollment level, enrollment status, sex, citizenship, and race and ethnicity (2019 questions 2 and 3). Full-time graduate student counts are also collected by primary source and mechanism of financial support (2019 question 4).

The 2019 GSS public-use data files are organized so that the institution, school, and GSS code– level data are available for each year all within a single record.<sup>1</sup> The data also include the Integrated Postsecondary Education Data System (IPEDS) UNITID, which allows researchers the ability to link the GSS institutions to other institutional data sources.

Public-use data are available for download by year. Key variables are also available for trend data tabulations through the National Centers for Science and Engineering Statistics (NCSES) interactive tool (<https://ncesdata.nsf.gov/ids/>).

#### **DATA FILE FORMATS**

The GSS public-use file is available in Excel and SAS formats.

The files available for download are as follows (YYYY stands for 1972–2019 GSS data collection years):

- gssYYYYc\_xlsx.zip files – contain gssYYYY\_code.xlsx Excel files
- gssYYYYc\_sas.zip files – contain gssYYYY\_code.sas7bdat SAS data sets

For compatibility issues with prior-round data, Excel files are divided by question number into three worksheets:

- Race (questions 2 and 3) – pt\_tot\_all\_races\_v ... ft\_frst\_wmen\_unknown\_v
- Support (question 4) – ft\_tot\_all\_srcs\_v ... ft\_oth\_mech\_self\_sup\_v
- Postdoc (questions 5 and 6) – pd\_tot\_all\_srcs\_v ... med\_degr\_oth\_non\_fcty\_v

As a convenience, the institution, school, and GSS code–level data are replicated for each associated record rather than providing separate institution, school, and GSS code–level files that would need to be merged together. The data contain the institution, school, and GSS code–level data gathered in question 1, and the variables are placed as leading variables in the SAS files and columns in the Excel

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<sup>1</sup> The GSS public-use data files are also available at the GSS organizational unit level by contacting the GSS project officer.

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files. SAS and Excel files are available by data collection year, and these files include all variables (institution, school, GSS code, part-time race, full-time race, support, and postdoc and NFR data all on one record). Starting in 2017, data are also available separately for master's- and doctoral-level enrollment.

### DATA FILE IDENTIFIERS

IDs are created to uniquely identify institutions and schools.

The ID structure is the following:

- year – identifies the year in which the data are collected
- institution\_id – identifies the institution
- school\_id – identifies a school that is unique across all institutions and not just a sequence within institution
- gss\_code – identifies the type of program and is unique within a school

The combination of year, school\_id, and gss\_code forms a unique record across the GSS data files.

As indicated in the ID structure, institutions can have more than one school—thus, there is the need for the school\_id variable. The school name is reported as the name of the school within the institution and is not unique across all schools. A unique name for the school containing the institution name and school name is available in the variable “full\_school\_name.”

In 2014, the GSS collected data from 708 institutions, including 151 institutions that were added to the survey universe as the result of a comprehensive frame evaluation and 2 that were dropped as the result of this frame evaluation. The final 2014 data file includes data from the 706 institutions eligible for the survey at the end of the 2014 cycle. Due to the frame expansion, these data are not comparable to prior-year data. To enable trend comparisons with 2013 and prior years, an additional “2014old” data file is available that contains the 2014 data from the 557 institutions eligible for the survey prior to the frame update. The “year” variable is coded to 2014old in the supplemental file and to 2014 in the main, final 2014 data file. More detailed information about the frame expansion can be found in a Special Report, *Assessing the Impact of Frame Changes on Trend Data from the Survey of Graduate Students and Postdoctorates in Science and Engineering* (<https://www.nsf.gov/statistics/2016/nsf16314/>).

In 2017, the GSS made significant changes to how the data were collected: it revised the taxonomy used to classify disciplines and added separate variables for master's and doctoral students. Due to these changes, the 2017 data are not comparable to prior years. A set of bridge estimates was created to permit comparisons to previous years and for trend analyses. These estimates are labeled 2017old and are available at the broad-field level for all combined graduate student variables and for postdoc variables. Since 2017old codes are at the broad-field level, fewer records are in 2017old than in 2016 or 2017new. For more information about the updated GSS taxonomy and the changes to the 2017 GSS and 2017old, including how to use 2017old, see appendix C, “Taxonomy Change Documentation,” in the GSS 2018 Methodology report.

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The following summary table is provided to help users confirm that they have imported the data files properly for a given year. It enumerates the number of institutions, schools, and GSS code– level records that were included in the GSS for the given year.

Year	Number of unique entities		
	Institutions	Schools	Records
1972	259	328	4,079
1973	262	340	5,688
1974	284	375	6,384
1975	584	682	7,741
1976	594	693	7,815
1977	601	704	8,007
1978	599	708	8,088
1979	629	745	8,252
1980	626	742	8,306
1981	622	736	8,240
1982	609	724	8,134
1983	609	723	8,015
1984	412	530	7,388
1985	412	525	7,437
1986	412	527	7,486
1987	416	533	7,575
1988	606	723	8,416
1989	609	726	8,515
1990	610	727	8,597
1991	609	726	8,719
1992	608	725	8,851
1993	606	723	8,969
1994	605	722	9,092
1995	603	720	9,184
1996	603	720	9,140
1997	601	722	9,162
1998	601	721	9,198
1999	599	719	9,267
2000	596	716	9,260
2001	601	720	9,302
2002	596	715	9,345
2003	593	712	9,377
2004	591	710	9,302
2005	588	702	9,225

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Year	Number of unique entities		
	Institutions	Schools	Records
2006	588	707	9,271
2007	582	700	9,563
2008	579	708	9,782
2009	575	703	9,909
2010	574	692	10,047
2011	565	686	10,041
2012	565	684	10,115
2013	564	680	10,143
2014old	557	671	10,233
2014	706	821	10,666
2015	711	824	10,830
2016	714	828	10,892
2017old	713	827	4,923
2017	703	814	11,303
2018	715	817	11,604
2019	714	809	11,804

Users can analyze data across GSS data collection years by concatenating the GSS data across multiple years to create a longitudinal data set. The “year” variable, which indicates the GSS data collection year, will need to be used as a key variable in the ID structure. The following summary table is provided to help users confirm that they have concatenated data properly across years. It enumerates the number of institutions, schools, and GSS code-level records that were ever included in the GSS.

Years	Number of unique entities		
	Institutions	Schools	Records
1972–2019	890	1,079	427,526

**INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM (IPEDS) UNITID**

One feature that should help facilitate analysts’ use of the data is the inclusion of the IPEDS UNITID. The IPEDS UNITID is linked to the School ID. The 2019 version of IPEDS is the latest version that was used to link to the schools. For convenience, UNITID is replicated in the file across years for the same school. If schools are not reported in the 2019 IPEDS file, the UNITID field is filled with a reserve code value of “999999.”

**DATA ITEMS**

The data variables collected over the years have consisted primarily of full- and part-time graduate students and postdocs, with detailed information on full-time student source (federal, nonfederal, other) and mechanism (e.g., fellowships, traineeships, research assistantships, or teaching

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assistantships) of primary support, sex, field of study, and citizenship. Starting in 2017, all graduate student data are available separately for master's and doctoral graduate students.

The collection of full- and part-time graduate student race and ethnicity data was introduced as an optional item in the 1979 survey and became a standard survey item in 1980. Data on the sex of part-time graduate students have been collected since 1977. Race and ethnicity data separated by sex have been collected for full- and part-time graduate students since 1993 and for first-time, full-time students since 1999.

Prior to 2017, graduate student data were collected as combined master's and doctoral data. Starting in 2017, master's and doctoral student data were separated and are available to data users as distinct variables for master's and doctoral students as well as combined for all graduate students.

Postdoc and NFR data were collected as combined counts until 1977, collected separately starting in 1979, and expanded substantially in 2010. See appendix A for more details.

Prospective data users should note that data items and types of institutions surveyed have varied over the years of the survey. For example, prior to 1992, permanent residents and temporary visa holders were collected as combined counts; from 1992 through the present, permanent residents are counted with U.S. citizens.

Major barriers for trend analysis using the GSS data are that the GSS institutions changed substantially over time and that improvements in data collection methodology can cause trend breaks. See "Historical Changes in the GSS" section for more details.

The variable list is grouped similarly to the questions presented in the current GSS survey worksheet. (See appendix B for variable applicability and item counts by year.)

- Variables 1–22 – institution, school, and GSS code-level data
- Variables 23–52 – part-time graduate student data (combined master's + doctoral student counts)
- Variables 53–82 – full-time graduate student data (combined master's + doctoral student counts)
- Variables 83–112 – first-time, full-time graduate student data (combined master's + doctoral student counts)
- Variables 113–226 – source and mechanism of primary support for full-time graduate student data (combined master's + doctoral student counts)
- Variables 227–256 – part-time master's student data
- Variables 257–286 – full-time master's student data
- Variables 287–316 – first-time, full-time master's student data
- Variables 317–430 – source and mechanism of primary support for full-time master's student data
- Variables 431–460 – part-time doctoral student data
- Variables 461–490 – full-time doctoral student data
- Variables 491–520 – first-time, full-time doctoral student data
- Variables 521–634 – source and mechanism of primary support for full-time doctoral student data (doctoral student counts)
- Variables 635–787 – postdoctoral appointee data

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- Variables 788–802 – NFR data

Prospective data users should note that graduate student data were collected for part-time students (question 2) and then for full-time students (question 3). To obtain counts for graduate students (regardless of full-time or part-time), users must sum the pt\_\* and ft\_\* variable fields.

The data collected on the number of postdocs and NFRs in GSS-eligible units were expanded in 2010, and significant effort was made to ensure that appropriate personnel were providing these data. Overall counts for both groups also increased substantially in 2010. It is unclear how much of these increases represent actual growth in postdocs and NFRs and how much results from improved data collection. More information on the improved data collection and changes in postdoc data can be found in an InfoBrief, *Counts of Postdoctoral Appointees in Science, Engineering, and Health Rise with Reporting Improvements*, available at <https://www.nsf.gov/statistics/infbrief/nsf13334/> and in NFR data in a Working Paper, *Examining the Reporting of Nonfaculty Doctorate Researchers in the Survey of Graduate Students and Postdoctorates in Science and Engineering*, at <https://www.nsf.gov/statistics/2015/ncses15201/>. Additionally, due to the changes in 2017 data collection, many institutions reported more NFRs due to underreporting in the past. Therefore, the trend data for both postdocs and NFRs should be used with caution.

The table in appendix C lists the data items, labels, and data type available in the GSS files.

Historical values for the following institution-level data items—hdg\_inst, toc\_code, hbcu\_flag, land\_grant\_flag, and Carnegie\_code—were overwritten and replaced with the most recent value for the institution through 2006. That is, the variables will be the 2006 value for all years 1972–2006. Beginning in 2007, these items have been updated if there is a change for that year, and historical values will not be overwritten.

The following code labels are provided for discrete items indicated in the data item table above.

hdg_inst	Institution highest degree 1 = Doctorate-granting (at least one science and engineering [S&E] doctoral organizational unit) 2 = Master's-granting
toc_code	Institution type of control 1 = Public 2 = Private
institution_state	Institution state code (a two-character state abbreviation) AL = Alabama AK = Alaska AZ = Arizona AR = Arkansas CA = California CO = Colorado CT = Connecticut DE = Delaware DC = District of Columbia FL = Florida MT = Montana NE = Nebraska NV = Nevada NH = New Hampshire NJ = New Jersey NM = New Mexico NY = New York NC = North Carolina ND = North Dakota OH = Ohio

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GA = Georgia	OK = Oklahoma
GU = Guam	OR = Oregon
HI = Hawaii	PA = Pennsylvania
ID = Idaho	PR = Puerto Rico
IL = Illinois	RI = Rhode Island
IN = Indiana	SC = South Carolina
IA = Iowa	SD = South Dakota
KS = Kansas	TN = Tennessee
KY = Kentucky	TX = Texas
LA = Louisiana	UT = Utah
ME = Maine	VT = Vermont
MD = Maryland	VI = Virgin Islands
MA = Massachusetts	VA = Virginia
MI = Michigan	WA = Washington
MN = Minnesota	WV = West Virginia
MS = Mississippi	WI = Wisconsin
MO = Missouri	WY = Wyoming

hbcu\_flag                      Historically black college flag  
0 = no  
1 = yes

land\_grant\_flag              Land grant flag  
0 = no  
1 = yes

carnegie\_code\_1994        Carnegie Code 1994 Classification  
R1—Research Universities I  
R2—Research Universities II  
D1—Doctoral Universities I  
D2—Doctoral Universities II  
C1—Master’s (Comprehensive) Universities and Colleges I  
C2—Master’s (Comprehensive) Universities and Colleges II  
LA1—Baccalaureate (Liberal Arts) Colleges I  
LA2—Baccalaureate (Liberal Arts) Colleges II  
2YR—Associate of Arts Colleges  
ART—Schools of Art, Music, and Design  
BUS—Schools of Business and Management  
ENG—Schools of Engineering and Technology  
HLT—Other Separate Health Profession Schools  
LAW—Schools of Law  
MED—Medical Schools and Medical Centers  
REL—Theological Seminaries, Bible Colleges, and Other Institutions  
          Offering Degrees in Religion  
TEA—Teachers Colleges  
TRI—Tribal Colleges and Universities  
OTH—Other Specialized Institutions

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N/A—Not Classified

carnegie_code_2005	Carnegie Code 2005 Classification
carnegie_code_2010	Carnegie Code 2010 Classification
	-1 (Not applicable)
	0 (Not classified)
	1 Assoc/Pub-R-S: Associate's—Public rural-serving small
	2 Assoc/Pub-R-M: Associate's—Public rural-serving medium
	3 Assoc/Pub-R-L: Associate's—Public Rural-serving Large
	4 Assoc/Pub-S-SC: Associate's—Public Suburban-serving Single Campus
	5 Assoc/Pub-S-MC: Associate's—Public Suburban-serving Multicampus
	6 Assoc/Pub-U-SC: Associate's—Public Urban-serving Single Campus
	7 Assoc/Pub-U-MC: Associate's—Public Urban-serving Multicampus
	8 Assoc/Pub-Spec: Associate's—Public Special Use
	9 Assoc/PrivNFP: Associate's—Private Not-for-profit
	10 Assoc/PrivFP: Associate's—Private For-profit
	11 Assoc/Pub2in4: Associate's—Public 2-year colleges under 4-year universities
	12 Assoc/Pub4: Associate's—Public 4-year Primarily Associate's
	13 Assoc/PrivNFP4: Associate's—Private Not-for-profit 4-year Primarily Associate's
	14 Assoc/PrivFP4: Associate's—Private For-profit 4-year Primarily Associate's
	15 RU/VH: Research Universities (very high research activity)
	16 RU/H: Research Universities (high research activity)
	17 DRU: Doctoral/Research Universities
	18 Master's L: Master's Colleges and Universities (large programs)
	19 Master's M: Master's Colleges and Universities (medium programs)
	20 Master's S: Master's Colleges and Universities (small programs)
	21 Bac/A&S: Baccalaureate Colleges—Arts & Sciences
	22 Bac/Diverse: Baccalaureate Colleges—Diverse Fields
	23 Bac/Assoc: Baccalaureate/Associate's Colleges
	24 Spec/Faith: Special Focus Institutions—Theological seminaries, Bible colleges, and other faith-related institutions
	25 Spec/Med: Special Focus Institutions—Medical schools and medical centers
	26 Spec/Health: Special Focus Institutions—Other health professions schools
	27 Spec/Eng: Special Focus Institutions—Schools of engineering
	28 Spec/Tech: Special Focus Institutions—Other technology-related schools
	29 Spec/Bus: Special Focus Institutions—Schools of business and management
	30 Spec/Arts: Special Focus Institutions—Schools of art, music, and design
	31 Spec/Law: Special Focus Institutions—Schools of law
	32 Spec/Other: Special Focus Institutions—Other special-focus institutions
	33 Tribal: Tribal Colleges
carnegie_code_2015	Carnegie Code 2015 Classification
	-2 Not applicable, not in Carnegie universe (not accredited or non-degree-granting)
	1 Associate's Colleges: High Transfer-High Traditional
	2 Associate's Colleges: High Transfer-Mixed Traditional/Nontraditional
	3 Associate's Colleges: High Transfer-High Nontraditional
	4 Associate's Colleges: Mixed Transfer/Career & Technical-High Traditional
	5 Associate's Colleges: Mixed Transfer/Career & Technical-Mixed Traditional/Nontraditional
	6 Associate's Colleges: Mixed Transfer/Career & Technical-High Nontraditional
	7 Associate's Colleges: High Career & Technical-High Traditional
	8 Associate's Colleges: High Career & Technical-Mixed Traditional/Nontraditional
	9 Associate's Colleges: High Career & Technical-High Nontraditional
	10 Special Focus Two-Year: Health Professions
	11 Special Focus Two-Year: Technical Professions
	12 Special Focus Two-Year: Arts & Design



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- 13 Special Focus Two-Year: Other Fields
- 14 Baccalaureate/Associate's Colleges: Associate's Dominant
- 15 Doctoral Universities: Highest Research Activity
- 16 Doctoral Universities: Higher Research Activity
- 17 Doctoral Universities: Moderate Research Activity
- 18 Master's Colleges & Universities: Large Programs
- 19 Master's Colleges & Universities: Medium Programs
- 20 Master's Colleges & Universities: Small Programs
- 21 Baccalaureate Colleges: Arts & Sciences Focus
- 22 Baccalaureate Colleges: Diverse Fields
- 23 Baccalaureate/Associate's Colleges: Mixed Baccalaureate/Associate's
- 24 Special Focus Four-Year: Faith-Related Institutions
- 25 Special Focus Four-Year: Medical Schools & Centers
- 26 Special Focus Four-Year: Other Health Professions Schools
- 27 Special Focus Four-Year: Engineering Schools
- 28 Special Focus Four-Year: Other Technology-Related Schools
- 29 Special Focus Four-Year: Business & Management Schools
- 30 Special Focus Four-Year: Arts, Music & Design Schools
- 31 Special Focus Four-Year: Law Schools
- 32 Special Focus Four-Year: Other Special Focus Institutions
- 33 Tribal Colleges

carnegie\_code\_2018

Carnegie Code 2018 Classification

- 2 Not applicable, not in Carnegie universe (not accredited or non-degree-granting)
- 1 Associate's Colleges: High Transfer-High Traditional
- 2 Associate's Colleges: High Transfer-Mixed Traditional/Nontraditional
- 3 Associate's Colleges: High Transfer-High Nontraditional
- 4 Associate's Colleges: Mixed Transfer/Vocational & Technical-High Traditional  
Associate's Colleges: Mixed Transfer/Vocational & Technical-Mixed  
Traditional/Nontraditional
- 5 Associate's Colleges: Mixed Transfer/Vocational & Technical-High Nontraditional
- 6 Associate's Colleges: High Vocational & Technical-High Traditional
- 7 Associate's Colleges: High Vocational & Technical-Mixed Traditional/Nontraditional
- 8 Associate's Colleges: High Vocational & Technical-High Nontraditional
- 9 Special Focus Two-Year: Health Professions
- 10 Special Focus Two-Year: Technical Professions
- 11 Special Focus Two-Year: Arts & Design
- 12 Special Focus Two-Year: Other Fields
- 13 Baccalaureate/Associate's Colleges: Associate's Dominant
- 14 Doctoral Universities: Very High Research Activity
- 15 Doctoral Universities: High Research Activity
- 16 Doctoral/Professional Universities
- 17 Master's Colleges & Universities: Large Programs
- 18 Master's Colleges & Universities: Medium Programs
- 19 Master's Colleges & Universities: Small Programs
- 20 Baccalaureate Colleges: Arts & Sciences Focus
- 21 Baccalaureate Colleges: Diverse Fields
- 22 Baccalaureate/Associate's Colleges: Mixed Baccalaureate/Associate's
- 23 Special Focus Four-Year: Faith-Related Institutions
- 24 Special Focus Four-Year: Medical Schools & Centers
- 25 Special Focus Four-Year: Other Health Professions Schools
- 26 Special Focus Four-Year: Engineering Schools
- 27 Special Focus Four-Year: Other Technology-Related Schools

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- 29 Special Focus Four-Year: Business & Management Schools
- 30 Special Focus Four-Year: Arts, Music & Design Schools
- 31 Special Focus Four-Year: Law Schools
- 32 Special Focus Four-Year: Other Special Focus Institutions
- 33 Tribal Colleges

hhe\_flag High Hispanic Enrollment Flag

0 = no

1 = yes

The High Hispanic Enrollment Flag is based on IPEDS enrollment data and indicates that Hispanic students represent at least 25% of the undergraduate full-time equivalent (FTE) enrollment at one or more of the IPEDS reporting units within the GSS institution. IPEDS is conducted annually by the National Center for Education Statistics. FTE enrollment is calculated by equating three part-time students to one full-time student.

school\_type\_code

School Type

G (Graduate) = Graduate Schools

M (Medical) = AAMC Member Medical Schools

N (Nursing) = Schools of Nursing

O (Osteopathic) = Schools of Osteopathic Medicine

P (Public) = Schools of Public Health

D (Dentistry) = Schools of Dentistry

V (Veterinary) = Schools of Veterinary Medicine

H (Hospital) = Hospital-Affiliated Medical Research Centers

A (Allied) = Schools of Professional or Allied Health

B (Both) = Schools with Programs from Both a Graduate School and an AAMC Member Medical School

U (Unique) = Other Health Sciences Schools

gss\_code

GSS Degree Program (Field of Study) Code

Engineering

101 Aerospace, aeronautical, and astronautical engineering

102 Agricultural engineering

103 Bioengineering and biomedical engineering

115 Biological and biosystems engineering

104 Chemical engineering

105 Civil engineering

106 Electrical, electronics, and communications engineering

107 Engineering mechanics, physics, and science

108 Industrial and manufacturing engineering

109 Mechanical engineering

110 Metallurgical and materials engineering

111 Mining engineering

116 Nanotechnology

112 Nuclear engineering

113 Petroleum engineering

114 Engineering nec

Physical Sciences

201 Astronomy and astrophysics

202 Chemistry

205 Materials sciences

203 Physics

204 Physical sciences nec

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GSS Degree Program (Field of Study) Code

Geosciences, atmospheric sciences, and ocean sciences

- 301 Atmospheric sciences and meteorology
- 302 Geological and earth sciences
- 303 Ocean and marine sciences
- 304 Geosciences, atmospheric sciences, and ocean sciences nec

Computer and information sciences

- 410 Computer science
- 411 Computer and information sciences, general
- 412 Computer and information sciences nec

Mathematics and statistics

- 402 Mathematics and applied mathematics
- 403 Statistics

Agricultural Sciences

- 501 Agricultural sciences

Natural resources and conservation

- 510 Environmental science and studies
- 511 Forestry, natural resources, and conservation

Biological and biomedical sciences

- 602 Biochemistry
- 603 Biology
- 623 Biomedical sciences
- 605 Biophysics
- 618 Biostatistics and bioinformatics
- 624 Biotechnology
- 606 Botany and plant biology
- 619 Cell, cellular biology, and anatomical sciences
- 620 Ecology and population biology
- 621 Epidemiology
- 610 Genetics
- 611 Microbiological sciences and immunology
- 622 Molecular biology
- 950 Neurobiology and neuroscience
- 612 Nutrition science
- 613 Pathology and experimental pathology
- 614 Pharmacology and toxicology
- 615 Physiology
- 616 Zoology and animal biology
- 617 Biological and biomedical sciences nec

Health Sciences (selected)

- 701 Anesthesiology
- 702 Cardiology
- 704 Endocrinology
- 705 Gastroenterology
- 706 Hematology
- 707 Neurology
- 708 Obstetrics and gynecology
- 703 Oncology and cancer research
- 709 Ophthalmology

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gss_code	GSS Degree Program (Field of Study) Code
	710 Otorhinolaryngology
	711 Pediatrics
	713 Psychiatry
	712 Public health
	714 Pulmonary disease
	715 Radiological sciences
	716 Surgery
	717 Clinical medicine nec
	723 Communication disorders sciences
	718 Dental sciences
	719 Nursing science
	720 Pharmaceutical sciences
	721 Veterinary biomedical and clinical sciences
	722 Other health nec
	Psychology
	803 Clinical psychology
	804 Counseling and applied psychology
	805 Research and experimental psychology
	801 Psychology, general
	Social Sciences
	901 Agricultural economics
	902 Anthropology
	911 Criminal justice and safety studies
	903 Economics (except agricultural)
	904 Geography and cartography
	905 History and philosophy of science
	915 Human development
	912 International relations and national security studies
	906 Linguistics
	907 Political science and government
	914 Public policy analysis
	908 Sociology
	910 Social sciences nec
	Multidisciplinary and interdisciplinary studies
	980 Multidisciplinary and interdisciplinary studies
hdg_code	Highest Degree Program Offered by GSS Code (may change from year to year)
	1 = Doctorate-granting (at least one S&E doctoral organizational unit)
	2 = Master's-granting
	3 = No PhD or Master's Equivalent (only applicable to postdoc organizational unit)

## HISTORICAL CHANGES IN THE GSS

Changes have been made to the coverage and content of the GSS to keep it relevant to the needs of data users. Such changes prevent precise maintenance of trend data; therefore, some data items are not available for all institutions in all years. Major changes in the data collected (with the year in which changes became effective) are available in the “Technical Notes” section of the *Graduate Students and Postdoctorates in Science and Engineering Data Tables* on the NCSES website at <https://www.nsf.gov/statistics/gradpostdoc/>.

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### **DATA ELEMENT AVAILABILITY BY YEAR**

Graduate student data are available annually for the years 1972–2019. Tables in appendix A show the types of data available in the GSS by survey year and the changes to the data item categories used to collect citizenship, race and ethnicity, source of support, and mechanism of support. Availability on the public-use data file is indicated by an “X.” These tables do not show changes to the GSS coverage of institutions or field. Data users are encouraged to review the “Aggregate Totals by Year” summary found in appendix B for more details regarding these changes.

### **DATA IMPUTATION**

The 2019 GSS collected 543 data items. Of the 543 data items collected in the GSS, the item nonresponse rates ranged from 0.72% to 6.80%. All missing data were imputed.

More information on the imputation is available in the “Technical Notes” section of the *Graduate Students and Postdoctorates in Science and Engineering* Data Tables on the NCSES website at <https://www.nsf.gov/statistics/gradpostdoc/>.

Imputation status codes are available on request in a supplemental data set that contains records at the organizational-unit level for each year of the study.

### **DATA CONFIDENTIALITY**

Data from the GSS are not considered confidential because all data are based on aggregate counts for the unit.

### **SURVEY QUESTIONNAIRE**

Copies of survey questionnaires for fall 1996–fall 2019 are available on the NCSES website at <https://www.nsf.gov/statistics/questionnaires.cfm#EducationofScientistsandEngineers>. Appendix D contains the 2019 survey questionnaire with annotated variable names for the corresponding data elements. Data users requiring information for earlier years can contact the National Science Foundation, GSS project officer.

In addition to reviewing the instructions and definitions provided in the questionnaire, data analysts are advised to use the most recent versions of the data for all years for trend data analyses.