



7555-01-P

NATIONAL SCIENCE FOUNDATION

Agency Information Collection Activities: Comment Request; Survey of Graduate Students and Postdoctorates in Science and Engineering.

AGENCY: National Science Foundation; National Center for Science and Engineering Statistics.

ACTION: Notice and request for comments.

SUMMARY: The National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF) is announcing plans to request renewal of the Survey of Graduate Students and Postdoctorates in Science and Engineering (OMB Control Number 3145-0062). In accordance with the requirements of the Paperwork Reduction Act of 1995, NSF is providing opportunity for public comment on this action. After obtaining and considering public comments, NSF will prepare the submission requesting that OMB approve clearance of this collection for three years.

DATES: Written comments on this notice must be received by [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER] to be assured of consideration. Comments received after that date will be considered to the extent practicable. Send comments to the address below.

FOR ADDITIONAL INFORMATION OR COMMENTS: Contact Suzanne H. Plimpton, Reports Clearance Officer, National Science Foundation, 2415 Eisenhower Avenue, Suite 18200, Alexandria, VA 22314; telephone (703) 292–

7556; or send email to *splimpto@nsf.gov* . Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including Federal holidays). You also may obtain a copy of the data collection instrument and instructions from Ms. Plimpton.

SUPPLEMENTARY INFORMATION:

Title of Collection: Survey of Graduate Students and Postdoctorates in Science and Engineering.

OMB Control Number: 3145–0062.

Expiration Date of Current Approval: October 31, 2020.

Type of Request: Intent to seek approval to extend an information collection for three years.

Abstract: Established within NSF by the America COMPETES Reauthorization Act of 2010 § 505, codified in the National Science Foundation Act of 1950, as amended, the National Center for Science and Engineering Statistics (NCSES) serves as a central Federal clearinghouse for the collection, interpretation, analysis, and dissemination of objective data on science, engineering, technology, and research and development for use by practitioners, researchers, policymakers, and the public.

The Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS), sponsored by the NCSES within NSF and the National Institutes of Health, is designed to comply with legislative mandates by providing information on the characteristics of academic graduate enrollments in science,

engineering and health fields. The GSS, which originated in 1966 and has been conducted annually since 1972, is a census of all departments in science, engineering and health (SEH) fields within academic institutions with graduate programs in the United States. This request to extend the information collection for three years is to cover the 2020, 2021, and 2022 GSS survey cycles. The information collected by the GSS is solicited under the authority of the National Science Foundation Act of 1950, as amended and the America COMPETES Reauthorization Act of 2010. Data collection starts each fall in October and data are obtained primarily through a Web survey. All information will be used for statistical purposes only. Participation in the survey is voluntary.

The total number of respondents surveyed in the 2020 survey cycle is estimated to be 911 School Coordinators. The GSS is the only national survey that collects information on the characteristics of graduate enrollment and postdoctoral appointees (postdocs) for specific SEH disciplines at the department level. It collects information on:

- 1) Master's and doctoral students' ethnicity and race, citizenship, gender, source and mechanism of financial support (e.g., fellowships, traineeships, assistantships) and enrollment status.
- 2) Postdocs' ethnicity and race, citizenship, gender, source and mechanism of financial support, type of doctoral degree, and degree origin (U.S. or foreign); and
- 3) Other doctorate-holding non-faculty researchers' gender and type of doctoral degree.

To improve coverage of postdocs, the GSS periodically collects information on postdocs employed in Federally Funded Research and Development Centers (FFRDCs) by ethnicity and race, gender, citizenship, source and mechanism of financial support, and field of research. This survey of postdocs at FFRDCs will be conducted as part of the 2021 GSS survey cycle.

The initial GSS data request is sent to the designated respondent (School Coordinator) at each academic institution in the fall. The School Coordinator may upload a file with the requested data on the GSS Website, which will automatically aggregate the data and populate the cells of the Web survey instrument for each reporting unit (departments, programs, research centers, and health care facilities). This method of data provision is called Electronic Data Interchange (EDI). The School Coordinator will be also able to upload partial data (e.g., student enrollment information) and delegate the provision of other data (e.g., financial support information) to appropriate reporting units at their institution (unit respondents). Institutions that do not want to use EDI will be able to complete the survey through manual entry of data in the Web survey instrument as in the past.

Data are disseminated annually on the NCSES website <https://www.nsf.gov/statistics/srvygradpostdoc> in the form of 73 data tables, a 3 to 5 page InfoBrief, and public use files (https://www.nsf.gov/statistics/srvygradpostdoc/pub_data.cfm). In addition, current and historical data are available via the NCSES Integrated Data Tool (https://ncesdata.nsf.gov/ids/?utm_source=Main&utm_medium=Main&utm_cam

paign=Main). The Data Tool combines GSS data with academic sector data from both NCSES and the National Center of Education Statistics and allows for custom querying.

Use of the Information: The GSS data are routinely provided to Congress and other Federal agencies. The GSS institutions themselves are major users of the GSS data. Professional societies such as the American Association of Universities, the Association of American Medical Colleges, and the Carnegie Foundation are also major users. Graduate enrollment and postdoc data are often used in reports by the national media. With the help of the aforementioned NCSES Data Tool, NSF reviews changing enrollment levels to: assess the effects of NSF initiatives, track graduate student support patterns, and analyze participation in science and engineering fields for targeted groups by discipline and for selected groups of institutions. GSS data are also used in two congressionally mandated NCSES publications: *Women, Minorities, and Persons with Disabilities in Science and Engineering* (<https://nces.nsf.gov/wmpd/>) and the National Science Board's *Science and Engineering Indicators* (<https://nces.nsf.gov/indicators>). In addition, the National Institutes of Health (NIH) publish GSS data annually in the NIH Data Book <https://report.nih.gov/nihdatabook/> .

Expected Respondents: The GSS is an annual census of all eligible academic institutions in the U.S. with graduate programs in science, engineering and health fields. The response rate is calculated based on the number of reporting units (departments, programs, research centers, and health care facilities) that

respond to the survey. For reference, in 2018, the GSS population was 19,592 units at 715 academic institutions. Based on recent cycles NCSES expects the annual response rate to be around 99 percent.

Estimate of Burden: For each GSS survey cycle, both School Coordinators and unit respondents are asked to report how long it took them to complete the data collection. Coordinators at FFRDCs are also asked about the hours required complete the Web instrument immediately after they submit the data. In the past three GSS cycles (2016-2018 data collections), the average burden per coordinator reported each cycle was 17.8 hours. However, burden varies considerably across respondents. The amount of time it takes to complete the GSS data depends to a large degree on the extent to which the school's records are centrally stored and computerized. It also depends on whether the institution uses manual data entry or EDI to provide the GSS data, the number of SEH reporting units that need to be reported by the institution, and the degree to which unit respondents within the institution are used to collect and report data.

To estimate burden for the next three GSS data collection survey cycles (2020, 2021, and 2022), the GSS frame is split by response method (EDI or manual entry) and the number of reporting units reported by the institution (more than 15 units are large reporters and 15 or fewer units are small reporters). Table 1 presents burden estimates based on observed institution reporting size and burden reports collected from the 2018 GSS survey cycle.

Table 1. Composition and reported burden of the 2018 GSS

Institution Type	Respondents (# of School Coordinators)	Percent of all School Coordinators	Average Burden (hours)	Total Burden (hours)
More than 15 units, EDI	318	35.3%	37.7	11,989
More than 15 units, Manual data entry	42	4.7%	41.2	1,730
15 or fewer units, EDI	363	40.3%	8.3	3,013
15 or fewer units, Manual data entry	178	19.8%	9.0	1,602
Totals	901	100.0%	20.3	18,334

The frame for the 2019 GSS includes 720 institutions comprising 822 schools with 906 total School Coordinators (some institutions utilize multiple School Coordinators based on how they are organized). To estimate the burden for the 2020-2022 GSS survey cycles, we assume a steady state in terms of the use of EDI but based on recent cycles we expect the number of School Coordinators to increase by five each cycle. New schools tend to have small numbers of eligible units and students, so the five coordinators are added to the small school manual data entry category. Thus, we expect to have 911 coordinators in 2020, 916 in 2021 and 921 in 2022. The estimated burden per respondent is approximately 20 hours per School Coordinator; the exact number is based on the distributions shown in Table 1, adjusted for the additional coordinators. Given the historically high levels of participation, a 100 percent school response rate is used in these

estimates. Since the FFRDC postdoc data collection will take place in 2021, the estimated burden for that year will increase by 73 hours from 43 FFRDCs (based on 100 percent response rate in 2017 survey with the average burden of 1.7 hours per FFRDC).

Table 2. GSS Estimated Response Burden

Category	Respondents (# of School Coordinators)	Total burden (hours)
Total burden for 2020	911	18,424
Total burden for 2021	959	18,542
<i>GSS institutions</i>	916	18,469
<i>FFRDCs</i>	43	73
Total burden for 2022	921	18,514
Potential future methodological studies (across all 3 survey cycles)		1,000
Total estimated burden	2,791	56,480
Estimated average annual burden	930	18,827

The total estimated respondent burden of the GSS, including 1,000 hours for potential methodological studies to improve the survey procedures, will be 56,480 hours over the three-cycle survey clearance period. NCSES may review

and revise this burden estimate based on completion time data collected during the 2019 GSS survey cycle, which is ongoing.

Comments: Comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of NSF, including whether the information shall have practical utility; (b) the accuracy of NSF's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, use, and clarity of the information on respondents, including through the use of automated collection techniques or other forms of information technology; and (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Dated: April 1, 2020.

Suzanne H. Plimpton,

Reports Clearance Officer,

National Science Foundation.

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