

Integrated Postsecondary Education Data System (IPEDS)

Website: <https://nces.ed.gov/ipeds/>

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1. OVERVIEW

The Integrated Postsecondary Education Data System (IPEDS) is the National Center for Education Statistics' (NCES) core postsecondary education data collection program, designed to help NCES meet its mandate to report full and complete statistics on the condition of postsecondary education in the United States. IPEDS collects institution-level data from providers of postsecondary education in the United States (the 50 states and the District of Columbia) and other jurisdictions, such as the U.S. Virgin Islands. IPEDS is a single, comprehensive system that is built around a series of interrelated survey components designed to collect institution-level data in such areas as enrollment, admissions, program completions, graduation rates and other outcome measures, retention rates, student financial aid, tuition and fees, faculty, staff, library data, and finances.

Since 1993, completion of the IPEDS survey has been mandatory for all postsecondary institutions with a Program Participation Agreement (PPA) with the Office of Postsecondary Education (OPE), U.S. Department of Education: that is, institutions that participate in or are eligible to participate in any federal student financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended (20 USC 1094[a] [17]). For institutions not eligible to participate in Title IV programs, participation in IPEDS is voluntary. For years prior to 1993, only national-level estimates from a sample of institutions are available for private less-than-2-year institutions.

In 1998, due to several externally mandated changes and additions to IPEDS, developments in technology for data collection and dissemination, emerging issues in postsecondary education, and new and increased expectations for IPEDS, a redesign task force was charged with recommending changes for the system. The primary recommendation was that IPEDS switch from paper forms to a solely web-based reporting system. The IPEDS program was completely redesigned for the 2000–01 survey year, and data collection was converted from a paper-based to a fully web-based system. The web-based survey instruments offer many features to improve the quality and timeliness of the data. IPEDS continues to be an annual survey, with data collection occurring three times per year in the fall, winter, and spring.

IPEDS replaced the Higher Education General Information Survey (HEGIS) in 1986. HEGIS collected data from 1966 to 1986 from a more limited universe of approximately 3,400 institutions accredited at the college level by an association recognized by the Secretary of the U.S. Department of Education. The transition to the IPEDS program expanded the universe to include *all* institutions whose primary purpose was the provision of postsecondary education. In 2017–18, a total of 6,642 Title IV institutions and 73 administrative offices (central or system offices) in the United States and other U.S. jurisdictions participated in data collection.

Of the 6,642 Title IV institutions, 2,902 were classified as 4-year institutions, 1,932 were 2-year institutions, and the remaining 1,808 were less-than-2-year institutions. The U.S.

SURVEY OF THE UNIVERSE OF POSTSECONDARY INSTITUTIONS

IPEDS collects data annually through these major components:

- Institutional Characteristics
- Completions
- 12-Month Enrollment
- Student Financial Aid
- Graduation Rates
- 200% Graduation Rates
- Outcome Measures
- Admissions
- Fall Enrollment
- Finance
- Academic Libraries
- Human Resources

Department of Education's Office for Civil Rights (OCR) has collaborated with NCES since 1976 on the collection of data from postsecondary institutions through compliance reports from postsecondary institutions mandated pursuant to Title VI of the Civil Rights Act of 1964, first through HEGIS and then through IPEDS.

Purpose

The purpose of IPEDS is to collect institution-level data from providers of postsecondary education, primarily all Title IV-eligible universities, colleges, and technical and vocational education providers in the United States and other jurisdictions.

Scope

All institutions in the U.S. and other U.S. jurisdictions that have a Program Participation Agreement (PPA) with the U.S. Department of Education to participate in Title IV federal student financial aid programs are required to report data to IPEDS, and are listed as separate entities in IPEDS. These entities are considered the "main campus" and can be identified by an 8-digit OPE ID that starts with 0 and ends with 00; digits 2 through 6 are referred to as the "root." The Postsecondary Education Participation System (PEPS) is the federal database which keeps track of PPAs, Title IV eligibility, and OPE ID assignments.

In addition, the following can be separate reporting entities in IPEDS, and are referred to as "institutions":

- Branch campuses and additional locations that conform to the IPEDS definition of branch campus and that share a PPA. These entities can be tied to the PPA holder through a shared "root" OPE ID.
 - The IPEDS definition of a branch campus is "a campus or site of an educational institution that is not temporary, is located in a community beyond a reasonable commuting distance from its parent institution, and offers full programs of study, not just courses."
- Online-only divisions of Title IV institutions.
- Non-traditional educational divisions (such as degree completion programs and other non-standard ventures that are substantially different from the institution's main business).
- Large national systems report data on a state-by-state or location-by-location basis.

There are about 6,760 Title IV institutions that report data to IPEDS. Postsecondary institutions that do not participate in Title IV programs can submit data to IPEDS on a voluntary basis. About 140 non-title IV institutions participated in the 2017–18 data collection.

On a yearly basis, Title IV institutions may be required to complete a reporting map before submitting IPEDS data. An institution's IPEDS Reporting Map describes how the data from the various additional locations that are listed on the institution's PPA are accounted for in the institution's IPEDS reporting. If there are differences between how the institution and additional locations are listed in IPEDS and how they are listed on the PPA, the institution must explain what that means for the institution's IPEDS reporting. Screens are presented on which to do this. The reporting relationships that can exist are:

- The main campus and each additional location on the PPA are listed separately in IPEDS, and report their own data.
- The main campus reports combined data for itself and any additional locations that are not listed separately in IPEDS.
- Additional locations that are not listed separately have the option of being made "campuses" in IPEDS; a small number of data items are reported for each of these locations, and they are searchable in College Navigator.

Components

The IPEDS program consists of several components that obtain information on who provides postsecondary education (institutions), on who participates in and completes the education (students), what programs are offered, what programs are completed, and the human and financial resources involved in the provision of postsecondary education. To avoid duplicate reporting and thus enhance the analytic potential of the database, the various IPEDS data elements and component surveys are interrelated. Survey components are tailored to each institution using institutional characteristics. In general, the most extensive data are collected from postsecondary institutions granting baccalaureate and higher degrees; less extensive data are requested from other types of institutions. This feature accommodates the varied operating characteristics, program offerings, and reporting capabilities of postsecondary institutions while yielding comparable statistics for all institutions.

The IPEDS program currently collects information from postsecondary institutions using a combination of survey components. Participation in IPEDS is a requirement for institutions that participate in Title IV federal student financial aid programs, such as Pell grants or Stafford loans. Title IV institutions include institutions of all levels (4-year, 2-year, less-than-2-year) and all controls (public, private nonprofit, and private for-profit). Because of the requirements for participation in Title IV federal financial aid programs, IPEDS focuses on the institutions designated as Title IV participants. Institutions that do not participate

in Title IV programs may participate in the IPEDS data collection on a voluntary basis.

IPEDS collects data three times per year—in the fall, winter, and spring. The *Institutional Characteristics*, *Completions*, and *12-month Enrollment* surveys are administered in the fall. The *Student Financial Aid*, *Graduation Rates*, *200% Graduation Rates*, *Outcome Measures*, and *Admissions* components are collected in the winter. The *Fall Enrollment*, *Finance*, *Academic Libraries*, and *Human Resources* components are administered in the spring.

Each of these components is described below; the abbreviation for the survey component is also provided after the component name.

Institutional Characteristics (IC). The core of the IPEDS program is the annual Institutional Characteristics component that is collected each fall; it is to be completed by all currently operating postsecondary institutions in the United States and other jurisdictions. As the control file for the entire IPEDS program, IC constitutes the sampling frame for all other NCES surveys of postsecondary institutions. It also helps determine the specific IPEDS screens that are shown to each institution. Additionally, IC data are used to sort and analyze the data files of the other IPEDS components.

Most IC data are collected for the academic year, which generally extends from September of one calendar year to June of the following calendar year. Specific data elements currently collected for each institution include the institution name, address, telephone number, web address, control or affiliation, calendar system, levels of degrees and awards offered, types of programs, and student services offered. The IC component also collects information on tuition and required fees data and other cost of attendance data which include room and board charges, books and supplies, and other expenses for full-time, first-time students. These data may be for the academic year or for the length of the program. These data are released on NCES's College Navigator website (available at <https://nces.ed.gov/collegenavigator/>). The College Navigator is designed to help prospective students and their parents understand the differences among colleges and how much it costs to attend college, as well as offer information on student financial aid, programs and services offered, enrollments, graduation rates, and accreditation, among other things.

Completions (C). The Completions component collects data each fall on recognized degree completions in postsecondary education programs by level (associate's, bachelor's, master's, and doctor's) and on other formal awards, both sub- and post-baccalaureate. These data are collected by race/ethnicity and gender of recipient and by

fields of study, which are identified by 6-digit Classification of Instructional Programs (CIP) codes from the NCES publication *Classification of Instructional Programs* (<https://nces.ed.gov/ipeds/cipcode/>).

The Completions component also collects information on the availability of programs of study that can be completed entirely through distance education by CIP code and award level (beginning with the 2012–13 data collection) and information on program completers by age, race/ethnicity, and gender (also with the 2012–13 data collection). OCR provided support to collect Completions data from 1976–2012.

12-Month Enrollment (E12). This component of the fall survey administration collects 12-month enrollment data for undergraduate and graduate students. The data collection includes unduplicated headcounts and instructional activity in contact or credit hours. Instructional activity is used to compute a standardized, 12-month, full-time-equivalent (FTE) enrollment; institutions may also report an alternate FTE if they feel the computed FTE does not accurately reflect their institution. The unduplicated data include demographic information on race/ethnicity and gender. The collection is based on the previous 12-month reporting period, which is July 1 through June 30. Starting with the 2012–13 data collection, E12 added an item that separately collects information on the full-time-equivalent enrollment for doctor's- professional-practice instructional activity.

Student Financial Aid (SFA). This winter collection component gathers student financial aid data on several different student populations: undergraduate students; a cohort of full-time, first-time, degree/certificate-seeking undergraduate students; and two subpopulations of that cohort. The financial aid data collected on the subpopulations are used to calculate the institution's average net price of attendance, as well as average net price of attendance by income category. Data are collected for the previous aid year. The number of students receiving aid and total amount of aid received are collected for different aid types; the average amount of aid received by type of aid and percent of students receiving aid by type of aid are calculated. For undergraduates, total grant or scholarship aid, Pell grants, and federal loans are the aid types. For the cohort, aid types are federal grants (Pell grants and other federal grants), state/local government grants or scholarships, institutional grants or scholarships, and loans to students (total loans, federal loans, other loans). In the 2014–15 academic year (the 2015–16 data collection), the component began data collection on undergraduate and graduate students receiving military service member and veteran benefits.

Graduation Rates (GR). This winter component collects data on institutions' initial cohort of full-time, first-time, degree/certificate-seeking undergraduate students; on the number of those students completing within 150 percent of the normal time; and on the number of students who transferred to other institutions. Four-year institutions report separately on their bachelor's degree-seeking students. Data are reported by race/ethnicity and gender. These data allow institutions to disclose and/or report information on the completion or graduation rates and transfer-out rates of their students as required by the Student-Right-to-Know Act. Worksheets automatically calculate rates within the web system. In the 2017–18 collection, four-year institutions used 2011 as the cohort year, while less-than-4-year institutions used 2014 as the cohort year. For 4-year institutions operating on standard academic terms (semester, trimester, quarter), students beginning in cohort year 2011 are those who were first-time students in the fall of the 2011–12 academic year. For 4-year institutions operating on other than standard academic terms, students beginning in cohort year 2011 are those who were first-time students between September 1, 2011, and August 31, 2012. Similarly, for less-than-4-year institutions operating on standard academic terms, students beginning in cohort year 2014 are those who were first-time students in the fall of the 2014–15 academic year. For less-than-4-year institutions operating on other than standard academic terms, students beginning in cohort year 2014 are those who were first-time students between September 1, 2014, and August 31, 2015.

One hundred percent graduation rates data are also collected; 4-year bachelor's degree program rates have been reported by 4-year institutions since 1997, and 100% rates have been reported by less-than-4-year institutions since 2008–09. Beginning in the 2016–17 collection year, data on cohort size, the number of completers within 150 percent of normal time to completion, and the number of cohort exclusions were collected from further disaggregation of the existing cohorts, which included the subcohort of students who received a Pell Grant and the subcohort of students who received a subsidized Stafford Loan but did not receive a Pell Grant.

200% Graduation Rates (GR200). This survey component was added to the spring collection in 2009–10 and is now collected in the winter. It is separate from the GR component so as not to confuse the two different cohorts that are being reported on. The GR200 asks institutions to report additional data on cohort students so that 200% graduation rates can be calculated. Graduation rates at 200 percent of normal time are calculated for full-time, first-time bachelor degree-seeking students at 4-year institutions, and for all full-time, first-time degree/certificate-seeking undergraduate students at less than 4-year institutions. In 2016–17, for 4-year institutions,

the cohort consisted of those students who first started in the 2008–09 academic year, and for 2-year and less-than-2-year institutions, the cohort was those students starting in the 2012–13 academic year.

Outcome Measures (OM). Starting in 2015–16, a new component, Outcome Measures, began to collect data from degree-granting institutions on 4 degree/certificate-seeking undergraduate student cohorts, specifically full- and part-time attendance levels for both first-time students and non-first-time entering students. Academic reporting institutions reported on fall cohorts; program and hybrid reporters reported on full-year cohorts. Data are not disaggregated by race/ethnicity or gender and no outcome measures data were collected from non-degree-granting institutions. For the winter 2017–18 collection, the cohorts consist of all entering students who began their studies between July 1, 2009, and June 30, 2010. Student completion status was collected as of August 31 at 4 years, 6 years, and 8 years after students entered the institution (e.g., 4-year completion status was measured on August 31, 2013). At each status point, institutions reported the highest level of award students earned as of that status point. For example, if a student earned an associate's degree within 4 years and a bachelor's degree within 6 years, the student would be reported in the associate's degree group at the 4-year status point and in the bachelor's degree group at the 6-year status point. For example, if a student earned an associate's degree within 4-years and a bachelor's degree within 6 years, the student would be reported as receiving a bachelor's degree and 6-years and not reported as receiving an associate's degree.

For each of the 4 cohorts, the Outcome Measures component is used to collect a status update at 8 years after the cohort entered the institution using the following categories: received award; did not receive award, still enrolled at reporting institution; did not receive award, subsequently enrolled at another institution; and did not receive award, subsequent enrollment status unknown. A total of students who did not receive an award is calculated. The award information is collected for both the 6-year and 8-year timeframes and the first cohort that was reported on is the 2007 cohort. Beginning in the 2017–18 collection year, each of the 4 cohorts were disaggregated into the subcohort of students who received a Pell Grant, the subcohort of students who did not receive a Pell Grant, the subcohort of transfer-in students, the subcohort of continuing students, and the subcohort of nondegree-seeking undergraduates.

Admissions (ADM). This annual component is required of all currently operating Title IV postsecondary institutions in the United States and other areas that enroll first-time undergraduate students and do not have an open admissions policy. Eligibility for ADM is determined using a screening question in the Institutional Characteristics component and open admissions

institutions will not see the component. Admissions data are collected in the winter for the current fall reporting period. Data are collected on admissions requirements, the number of applicants, admitted students, the number of admitted students that subsequently enrolled, and percentiles for ACT and SAT test scores. The number of applicants, admitted students, and enrolled students are disaggregated by gender; enrolled students are further disaggregated by part-time and full-time status. Prior to the 2014–15 data collection cycle, ADM was part of the Institutional Characteristics component. When ADM was part of the Institutional Characteristics component, institutions had the choice of reporting for the most current fall or the previous fall period. In 2014–15, it became part of the winter data collection.

For the winter 2017–18 collection, data collected correspond to individuals applying to be admitted during the fall of the 2017–18 academic year (the fall 2017 reporting period). For institutions operating on a traditional academic year calendar system (semester, trimester, quarter, or 4-1-4 system), the fall 2017 reporting period is the term containing the institution’s official fall reporting date, or October 15, 2017, if the official fall reporting date is after October 15. For institutions operating on a continuous enrollment or program-based calendar system, the fall 2017 reporting period is August 1, 2017, through October 31, 2017.

Fall Enrollment (EF). This spring component collects data on the number of full- and part-time students enrolled in postsecondary institutions in the United States and its other jurisdictions, by level (undergraduate, graduate), race/ethnicity, and gender. The 2017–18 Fall Enrollment component collected student enrollment data for fall 2017. Data were collected on the race/ethnicity and gender of students, attendance status (full- or part-time), and student level (undergraduate or graduate). The undergraduate students include degree-seeking first-time students, transfer-in and continuing students and nondegree-seeking undergraduates. Institutions were also required to report data by age, whereas reporting student state of residency was optional. In addition, data were collected on the number of students enrolled exclusively in distance education courses, in any distance education courses, or in no distance education courses. These data were reported by student level, undergraduate degree-seeking status, and student residence location (i.e., in the same state or jurisdiction as the institution; in a different state or jurisdiction as the institution; outside the U.S.; or unknown). The Fall Enrollment component also collected retention rates and student-to-faculty ratios.

Institutions report: 1) students enrolled in courses creditable toward a degree or other formal award; 2) students enrolled in courses that are part of a vocational or

occupational program, including those enrolled in off-campus centers; and, 3) high school students taking regular college courses for credit. An item that asks for the total number of undergraduates in the entering class (including first-time, transfer, and non-degree students) was added in 2001 to provide context for the graduation rates cohort. Full- and part-time, fall-to-fall retention rates for first-time degree/certificate-seeking students are also collected. For bachelor’s degree-offering institutions, only bachelor’s students are included in the retention rate.

Age-related data are collected in odd-numbered years by student level. Data on the state of residence of first-time students, as well as data on the number of first-time students who graduated from high school in the past 12 months, are collected in even-numbered years (replacing the previously administered *Residence of First-Time Students* survey). In even-numbered years, four-year institutions are also required to complete enrollment data by level, race/ethnicity, and gender for selected fields of study: Education, Engineering, Law, Biological Sciences/Life Sciences, Mathematics, Physical Sciences, Dentistry, Medicine, and Business Management and Administrative Services. The specified fields and their codes are taken directly from CIP. In the 2012–13 data collection, EF began collecting information on the number of students enrolled in any distance education program and the number of students enrolled exclusively in distance education programs. OCR supported the collection of these data from 1976–2012.

Academic Libraries (AL). This spring component collects information from degree-granting institutions on library collections, expenditures, and services for the fiscal year. Institutions answer a screening question within the Institutional Characteristics component that determines the requirement to complete the AL component and the correct section to complete. The AL component consists of two sections: Section I is completed by institutions reporting total library expenditures greater than zero, and Section II is completed by institutions with total library expenditures greater than \$100,000. Section II collects additional expenditures and interlibrary service information. Section I collects data on the library collections and circulation numbers including physical books, media, digital or electronic books (including government documents), digital or electronic databases, and digital or electronic media. Section II collects data on the number of branch and independent libraries as well as expenditures including library staff wages and fringe benefits, materials and service costs, operations and maintenance expenditures, and interlibrary services. As of the 2014–15 collection, institutions with no library expenditures are not required to respond to the AL component.

Human Resources (HR). The administration of the Human Resources component was moved to the spring in the 2012–13 data collection (it had previously been administered in the winter). The Human Resources component collects data that were previously collected by three separate survey components: *Employees by Assigned Position*, *Fall Staff*, and *Salaries*. These were merged into the single HR component beginning with the 2005–06 survey year in order to simplify reporting and ensure data consistency and accuracy; the survey instrument was revised further starting with the 2012–13 data collection.

Beginning with the winter 2001–02 collection, the Employees by Assigned Position (EAP) survey component, an annual collection proposed by the National Postsecondary Education Cooperative focus group on faculty and staff, was instituted, to unify the Fall Staff and Faculty Salaries data collections. The EAP survey component was optional in the first year but became mandatory in 2002–03.

The Fall Staff data, now part of the HR survey component, was previously a separate collection. Institutions with 15 or more full-time employees are required to report annually (prior to 2016–17, data was collected biennially, for odd-numbered years). Between 1987 and 1991, the Fall Staff data were collected in cooperation with the U.S. Equal Employment Opportunity Commission (EEOC). Beginning in 1993, all schools formerly surveyed by EEOC reported through IPEDS Fall Staff. Prior to 2001, this collection also requested the number of persons donating (contributing) services or contracted for by the institution.

The primary purpose of the Salaries portion of the HR survey component is to collect data on the salaries, tenure, and fringe benefits of full-time instructional staff (referred to as instructional faculty prior to the 2005–06 survey year) by contract length, gender, and academic rank. Institutions are excluded from completing the Salaries section if all of their instructional staff (1) are employed on a part-time basis, (2) are military personnel, (3) contribute their services (e.g., members of a religious order), or (4) teach preclinical or clinical medicine.

Data are also collected on total salary outlays; total number of full-time instructional non-medical staff paid these outlays; and number of staff members with tenure, on tenure track, and not on tenure track. These data are collected by rank (professor, associate professor, assistant professor, instructor, lecturer, no academic rank), gender, and contract length. Fringe benefits data were collected through 2010–11.

The current Human Resources survey component categorizes all staff on the institution's payroll as of November 1 of the collection year, by full- and part-time

status, by function or occupational category, and by faculty status and tenure status (if applicable). Institutions with medical schools are required to report their medical school data separately. The medical school questions of EAP are applicable to institutions with Doctor of Medicine (M.D.) and/or Doctor of Osteopathic Medicine (D.O.) programs only. Employees who are in health disciplines that are not considered part of the medical school are reported in the nonmedical school part of EAP.

Data are also collected on the number of full-time staff by contract length; number of other persons employed full time by primary occupational activity and salary class intervals; part-time employees by primary occupational activity; tenure of full-time faculty by academic rank; and new hires by primary occupational activity. Salary class interval data were collected through 2010–11.

In the 2012–13 data collection cycle, the administration of the Human Resources component was moved to the spring and many changes were implemented. For example, the component adopted new occupational categories to align with the 2010 Standard Occupational Classification (SOC). For all degree-granting universities, revisions were made to the definition of primarily instruction category so that instructional activity could be reported separately for for-credit and not-for-credit courses or a combination of them. Revisions were also made to collect information on salary outlays for full time non-instructional non-medical staff by occupational category. For degree granting institutions with 15 or more full-time staff, items were added to determine whether the institution had a tenure system; as well, the categories of non-tenure-track faculty were revised to include the following: Multi-Year and indefinite contracts, Annual contract, Less than annual, and Without faculty status.

The Salaries data collection was changed from a biennial to an annual collection in 1990, and data was not collected in 2000.

Finance (F). This component, administered in the spring, collects summary data on each institution's financial status in the applicable fiscal year. The Finance component has different versions of the form based mainly on control of the institution: public, private nonprofit, and private for-profit. Non-degree-granting institutions also receive shorter versions of the form. The primary purposes of this annual component are to collect data to describe the financial condition of postsecondary education in the nation; to enable changes in postsecondary education finance to be monitored; and to promote research involving institutional financial resources and expenditures. The 2017–18 Finance component collected financial statistics, such as assets and liabilities, scholarship and fellowship sources, endowments, and

institutional revenues and expenses, for the most recent fiscal year ending prior to October 2017 (fiscal year 2017).

For public institutions that use Governmental Accounting Standards Board (GASB) reporting standards to prepare their financial statements, data are collected on their net positions, plant, property, and equipment, revenues and other additions, expenses by functional and natural classification, scholarships and fellowships, pension information, and endowment assets. Additionally, certain data are collected for the U.S. Bureau of the Census, including revenue data, expenditure data, and debts and assets.

Private nonprofit institutions and public institutions that use Financial Accounting Standards Board (FASB) reporting standards to prepare their financial statements report data on their net assets, scholarships and fellowships, revenues and investment return, expenses by functional and natural classification, and endowment assets. A shortened version of the nonprofit form was developed for private for-profit institutions for use from 1997–98 to 2013–14, and data were collected on balance sheet information, equity, scholarships and fellowships, revenues and investment return, income tax information, and expenses by functional and natural classification.

A 2-year phase-in period began with the 2008–09 data collection in an effort to implement additional changes that better align the finance reporting of public and private institutions. Since the 2010–11 collection, all public and nonprofit institutions have used the newly-aligned form for reporting expenses. The data collection instrument for for-profit institutions was further aligned with the nonprofit instrument starting with the 2014–15 data collection. Private for-profit institutions were required to report more detailed data beginning with 2014–15 data collection. This change was implemented to increase data comparability across institutional sectors. Beginning with the 2016–17 data collection, the detailed reporting of natural expense categories by public, nonprofit, and for-profit institutions was eliminated, except for salaries and wages. This was an effort to reduce burden and promote higher quality data.

Periodicity

The IPEDS program replaced the HEGIS program in 1986. The IPEDS survey is separated into 12 components, which correspond to three seasonal reporting periods. The *Institutional Characteristics*, *Completions*, and *12-month Enrollment* surveys are administered in the fall. The *Student Financial Aid*, *Graduation Rates*, *200% Graduation Rates*, *Outcome Measures*, and *Admissions* components are collected in the winter. The *Fall Enrollment*, *Finance*, *Academic Libraries*, and *Human Resources* components are administered in the spring.

Data Availability

IPEDS data through Spring 2018 are publicly available at <https://nces.ed.gov/ipeds/use-the-data>.

2. USES OF DATA

The IPEDS surveys provide a wealth of national-, state-, and institution-level data for analyzing the condition of postsecondary education institutions. For example, the data can be used (with the earlier HEGIS data) to describe long-term trends in higher education. NCES uses the IPEDS data in annual reports to Congress on the condition of postsecondary education, statistical digests, profiles of higher education in the states, and other publications. In addition, many requests for information based on the IPEDS surveys are received each year from Congress, federal agencies and officials, state agencies and officials, education associations, individual institutions, the media, and the general public. Federal program staffers use the IPEDS data to address various policy issues. State policymakers use the IPEDS data for planning purposes and comparative analysis. Institutional staffers use the data for peer analysis.

The IPEDS data respond to a wide range of specific educational issues and public concerns. Policymakers and researchers can analyze the types and numbers of postsecondary institutions; the number of students, graduates, first-time students, and graduate and professional students by race/ethnicity and gender; the status of postsecondary vocational education programs; the number of individuals trained in certain occupational and vocational fields by race/ethnicity, gender, and level; the resources generated by postsecondary institutions; patterns of expenditures and revenues of institutions; changes in tuition and fees charged and student financial aid received; completions by type of program, level of award, race/ethnicity, and gender; faculty composition and salaries; and many other topics of interest.

The IPEDS universe also provides the institutional sampling frame used in all NCES postsecondary surveys. For example, the National Postsecondary Student Aid Study (NPSAS) uses the IPEDS institutional universe for its first-stage sample and relies on IPEDS data to weight its second-stage sample.

3. KEY CONCEPTS

Described below are several key concepts relevant to the IPEDS program. For additional terms, refer to the *IPEDS Glossary* at <https://nces.ed.gov/ipeds/glossary>.

Postsecondary education. A formal instructional program whose curriculum is designed primarily for students who are beyond the compulsory age for high school. This includes programs whose purpose is academic, vocational,

or continuing professional education, and excludes avocational and adult basic education programs.

Postsecondary education institution. An institution which has as its sole purpose or one of its primary missions, the provision of postsecondary education.

Degree-granting institution. Any institution offering an associate's, bachelor's, master's, doctor's, or first-professional degree. Institutions that grant only certificates or awards of any length (less than 2 years, or 2 years or more) are categorized as non-degree-granting institutions.

CIP code. A 6-digit code, in the form xx.xxxx, that identifies instructional program specialties within educational institutions. The codes are from the NCES publication *Classification of Instructional Programs* (<https://nces.ed.gov/ipeds/cipcode/>).

Unit ID. A unique identification number assigned to postsecondary institutions surveyed through IPEDS. Also referred to as UNITID or IPEDS ID.

4. SURVEY DESIGN

Target Population

All institutions (in the 50 states, the District of Columbia, and other jurisdictions) whose purpose is the provision of postsecondary education may participate in IPEDS, but the majority of institutions represented are those that are eligible to participate in Title IV federal student financial aid programs. The IPEDS universe includes institutions and branch campuses that offer a full program of study (not just courses); freestanding medical schools, as well as schools of nursing, schools of radiology, etc., within hospitals; and schools offering occupational and vocational training with the intent of preparing students for work.

The IPEDS universe of postsecondary institutions does *not* include institutions that are not open to the general public (training sites at prisons, military installations, or corporations); hospitals that offer only internships or residency programs or that offer only training as part of a medical school program at a postsecondary institution; organizational entities providing only noncredit continuing education; schools whose only purpose is to prepare students to take a particular test, such as the Certified Public Accountant (CPA) or bar exams; and branch campuses of U.S. institutions in foreign countries. Relevant data from such locations or training sites are to be incorporated into the data reported by the main campus or any other institution or branch campus in the system that is most appropriate. Prior to 2010–11, Title IV institutions that were not primarily postsecondary (e.g., secondary technical schools with a small postsecondary component) reported to IPEDS voluntarily; since 2010–11 their participation has been required.

Eligibility for Title IV federal financial aid, while not a requirement for inclusion in the universe, defines a major subset of all postsecondary institutions. Prior to 1996, aid-eligible institutions were self-identified or were identified as aid-eligible from responses to items in the Institutional Characteristics survey. Since 1996, the subset of aid-eligible institutions has been validated by matching the IPEDS universe with the PEPS file maintained by OPE, the office that grants institutions eligibility for participating in Title IV federal financial aid programs. As an example, 126 postsecondary institutions that had been included in prior IPEDS data collections were outside the scope of IPEDS in 2013–14 due to being closed, merging with another institution, or no longer offering postsecondary programs. A review of PEPS then added 193 postsecondary institutions to the universe; however the net change in number of institutions since the previous IPEDS data collection was less than half of a percentage point.

In establishing the PEPS file, the U.S. Department of Education discontinued its tradition of distinguishing institutions accredited at the college level from institutions accredited at the occupational/vocational level. Therefore, it is no longer possible for NCES to maintain a subset of accredited institutions at the college level (IHEs). Beginning with the 1997 IPEDS mailing and in the 1996 and subsequent data files, institutions have been classified by whether or not they are eligible to participate in Title IV financial aid programs and whether or not they grant degrees (as opposed to awarding only certificates).

Sample Design

Prior to 1993, data were collected from a representative sample of about 15 percent of the universe of private, for-profit, less-than-2-year institutions. However, the Higher Education Act of 1992 mandated the completion of the IPEDS surveys for all institutions that participate in or are applicants for participation in any federal student financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended. Thus, beginning with the 1993 IPEDS mailing, NCES surveys in detail *all* postsecondary institutions meeting this mandate.

Data Collection and Processing

IPEDS data are submitted by institutions, or by state agencies on behalf of institutions, through a web-based data collection system. Data may be key-entered or uploaded using a fixed file, key value, or XML format. Interactive edits are run through the data collection system, and the data provider must clear the edits and “lock” the data submission. Additional quality control edits are run on the data prior to data release.

The web-based data collection system was implemented with the 2000–01 collection cycle, with contractors

developing the website and managing the collection process. Prior to 2000–01, survey forms were either submitted directly by the institutions or through a central or state coordinating office.

The IPEDS institution-level data collection allows for aggregation of results at various levels and permits significant controls on data quality through editing. Attempts are made to minimize institutional respondent burden by coordinating data collection with the states and with other offices and agencies that regularly collect data from institutions.

Starting from the winter 2016–17 collection, data for all components were collected through the IPEDS web-based data collection system. Data for Spring 2018 were collected between December 13, 2017, and April 11, 2018. Data were provided by “keyholders,” institutional representatives appointed by campus chief executives, who were responsible for ensuring that survey data submitted by the institution were correct and complete. No problems were noted during the Spring 2018 data collection. During the collection period, the IPEDS help desk was available to assist respondents with reporting the necessary data.

Reference dates. Data for the IPEDS component surveys are collected for a particular academic year, 12-month period, or fiscal year, as follows:

- The *Institutional Characteristics* component collects data for the entire current academic year, generally starting in September, or with the fall term, if there is one. In the case of schools operating on a 12-month calendar, the reference period runs from the current September through August. The exception to this is the cost of attendance, which is collected by academic year for institutions with an academic calendar and by the entire program for institutions with calendars that differ by program or enroll on a continuous basis.
- The *Completions* component collects data in the fall for an entire 12-month period, which is defined as July 1 through June 30.
- The *12-month Enrollment* component collects data in the fall for a 12-month reporting period in the previous year from July 1 through June 30.
- The *Student Financial Aid* component collects data for the prior aid year. Institutions reporting on a fall cohort report aid for the prior academic year; institutions reporting on a full-year cohort report aid for the prior 12-month period.
- The *Graduation Rates*, *200% Graduation Rates*, and *Outcome Measures* components are collected in the winter, and institutions report on the status of students in

their cohort (either a fall cohort or a full-year cohort) as of August 31. For the *Outcome Measures* component, beginning with the 2017–18 collection year, all degree-granting institutions report on a 12-month (full-year) cohort.

- The *Admissions* component collects data for the current fall.
- The *Fall Enrollment* component collects data in the spring for a single point in time during the fall term, usually recorded as of the institution’s official fall reporting date or October 15. Institutions that operate on a continuous basis report their fall enrollment based on the time period between August 1 and October 31. If there is no fall term enrollment, institutions are asked to report zero enrollment.
- The *Finance* component collects data for the institution’s most recent fiscal year ending before October 1.
- The *Human Resources* component collects data in the spring pertaining to the number of staff on the institution’s payroll as of November 1. Additionally, the HR component collects data on new hires from July 1 through October 31 of the survey year. Salaries (and fringe benefits data previously collected through 2011–12) reflect the full academic year. Prior to the 2001 collection, institutions reported salaries as of October 1.
- The *Academic Libraries* component collects data for the previous fiscal year.

Data collection. Since institutions are the primary unit of data collection, institutional units must be defined as consistently as possible. The IPEDS program does not request separate reports from more than one component within an individual institution; however, separate branch campuses are asked to report as individual units. Since the HEGIS model, the IPEDS program has focused on collecting data from each institution in a multi-institutional system, and from each separate branch in a multi-campus system.

Schools targeted as “possible adds” are identified from many sources, including a review of the PEPS data file from OPE, and information received from the institutions themselves. Institutions are added to the universe if they respond that they provide postsecondary education as defined in the survey. Unlike in past years (prior to 2000), these institutions submit all survey components in their first year in IPEDS.

Institutions found to be closed or out-of-scope during data collection are deleted from the IPEDS universe. These deletions result from formal notification from PEPS, the

institution, or the IPEDS state coordinators. Included in the deletions are (1) duplicates of other institutions on the file; (2) institutions that closed or merged with another institution and, thus, are no longer legitimate institutions or branches; (3) institutions that no longer offer postsecondary programs; and (4) schools that do not conform to the IPEDS definition of an institution or branch. The final IPEDS universe is also adjusted to reflect institutions that have changed from one sector to another.

Institutions receive letters or emails in August containing UserIDs and passwords for the web-based data collection system and instructions for registering their *keyholder*. The keyholder is responsible for entering and locking the institution's data by each collection close date. Follow-up is done by email and telephone and is conducted either directly with the keyholder or with the institution's chief executive officer (if there is no registered keyholder). State IPEDS coordinators also conduct follow-up.

To ease respondent burden, the *Institutional Characteristics* web screens include previously reported data, and survey respondents are instructed to update the previous data, if necessary, and to provide current information for items such as tuition and required fees, and room and board charges. (In earlier years, *IC* forms were preprinted with prior-year survey responses for those items that generally were not expected to change from year to year.) Screens for other IPEDS components contain selected information from previous reporting (such as CIP codes and program titles in the screens for the *Completions* and *Enrollment* components, and cohort for *Graduation Rates*). Prior year values are preloaded on screens for reference and to edit against and values are brought forward from one section to another where they must match. Totals, differences, ratios, and rates are calculated by the data collection system. Institutions may choose to key enter their data into the system, or to upload a file in a fixed, key value, or, more recently, XML format.

State and system IPEDS coordinators play a large role in the submission and review of IPEDS data. In many states, the IPEDS institutional data are provided by the state higher education agency from data collected in state surveys. Coordinators may choose the sectors and institutions they wish to monitor (e.g., they can identify just 4-year schools or specify particular institutions); they can also choose to view the data only, or actually review, approve, and "lock" the data. Alternatively, state agencies may extract data from IPEDS rather than conduct their own surveys.

Prior to web-based data collection, mailings of survey forms generally took place in July of the survey year. Due dates varied by component. Extensive follow-up for survey nonresponse was conducted during the 6 months following

each component's due date. Initially, reminder letters were mailed, encouraging nonresponding institutions to complete and return their forms. Subsequently, the Postsecondary Education Telephone System (PETS) was used to collect critical data by telephone from representatives of institutions for which the IPEDS state coordinators were not responsible for follow-up.

Institutions reported the IPEDS data by mail (on paper forms or diskettes), by fax, or electronically through the Internet. Two methods were available: the first method involved a predetermined ASCII record layout, available for all surveys, except *Institutional Characteristics*. For the *Fall Enrollment* and *Graduation Rate* surveys, a second method was available that used downloadable software for data entry as well as preliminary editing of the data before transmission to the Census Bureau.

The 2017–18 IPEDS universe included 6,642 Title IV institutions and 73 administrative offices (central or system offices) in the United States and other United States jurisdictions¹.

Editing. Edit checks are built into the web-based data collection instrument to detect major reporting errors. The system automatically generates percentages for many data elements and totals for each survey page. Based on these calculations, edit checks compare current responses to previously reported data. The percent variance necessary to trigger an edit check varies depending on the data element being compared, but data elements are typically considered out of the expected range if the variance is greater than 25 percent. Edit checks can be run by the keyholder at any time during the collection, and all edit failures are required to be resolved before the keyholder can lock the data. As edit checks are executed, survey respondents are allowed to correct any errors detected by the system. If data are entered correctly but fail the edit checks, the survey respondents are asked either to confirm that the data are correct as entered or to key in a text message explaining why the data appear to be out of the expected data range. Additionally, some edit failures are "fatal"; in these cases, the data must be corrected by the keyholder rather than confirmed or explained, or an edit override must be performed. Keyholders can contact the IPEDS help desk to request overrides. Survey respondents are also provided with one or more context boxes for each survey component and are encouraged to use them to

¹ The other United States jurisdictions are American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, the Marshall Islands, Palau, Puerto Rico, and the U.S. Virgin Islands.

explain any special circumstances that might not be evident in their reported data.

Final quality control procedures are performed when all institutions have responded or data for them have been imputed.

Before the conversion to a web-based reporting system in 2000–01, all data, whether received on paper forms, diskettes, electronically through the Internet, or through PETS, went through the same editing process to verify internal and inter-year consistency. Additional checks were performed by adding down or across columns and comparing generated totals with reported totals. If the reported total differed from the generated total but was within a designated range, the reported total was replaced by the generated total and the cell was flagged with the proper imputation code. Otherwise, institutions were contacted to resolve the discrepancies.

Estimation Methods

Weighting. Weighting is not necessary because IPEDS is a universe survey.

Imputation. Imputation is done to compensate for nonresponse at the institution level and for nonresponse to specific data items. A single imputation is performed after all editing has been completed, using the nearest-neighbor approach. All the IPEDS components use the same imputation flags. Institutions whose data are entirely imputed may be identified in the file by their response status and imputation type codes. For responding institutions whose data are partially imputed, the affected items may be identified by the associated item imputation flags.

In the past, the IPEDS used *cold-deck* (updated by ratio methods to reflect the change) and *hot-deck* imputation procedures to adjust for partial or total nonresponse to a specific survey instrument.

Imputed data are on file for institutions with partial or total nonresponse. Caution should be exercised when comparing institutions for which data have been imputed, since these data are intended for computing national totals and not intended to be an accurate portrayal of an institution's data. Users should also be cautious when making year-to-year enrollment comparisons by state. In some cases, state enrollment counts vary between years as a result of imputation rather than actual changes in the reported enrollment data. To avoid misinterpretation, users should always check the response status codes of individual institutions to determine if a large proportion of data was imputed.

History of Changes

Some of the substantial changes to the IPEDS program are summarized in this section.

- Prior to 1993, a representative sample of about 15 percent of the universe of private, for-profit, less-than-2-year institutions was surveyed to obtain national estimates for fall enrollment, completions, finance, and fall staff data. These data were weighted and subject to sampling error. Since 1993, IPEDS has surveyed the entire universe of postsecondary institutions.
- The primary focus of the IPEDS data collections is to collect data from Title IV institutions. These institutions have Program Participation Agreements (PPAs) with the Office of Postsecondary Education (OPE) within the U.S. Department of Education and thus are eligible to participate in Title IV student financial aid programs. The IPEDS program no longer differentiates between accredited college-level institutions and postsecondary institutions with occupational or vocational accreditation. Beginning with the 1996 data files, institutions are classified based on: 1) whether or not they are eligible to participate in Title IV financial aid programs, and 2) whether or not they grant degrees, instead of being classified based on highest level of degree offered.
- Beginning with the 1997 mailing, the IPEDS universe was subdivided according to (1) accreditation status, (2) level of institution, and (3) degree-granting status.
- When paper versions of the survey were administered prior to 1996, a *Consolidated Form (CN and CN-F)* was used to collect the IPEDS data from accredited institutions that only granted certificates at the subbaccalaureate level. The *Consolidated Form* consisted of four or five parts designed to collect minimal enrollment and completions data on the same schedule as the regular IPEDS components, by race/ethnicity and gender, and collected data on finance, fall staffing, and academic libraries. As of 1996, the *Finance* part of the *Consolidated Form* was moved to a separate form (*CN-F*). The purpose and use of the *Consolidated Form* was the same as for the full package of surveys: to allow national data on all accredited institutions to be presented and analyzed. The *Consolidated Form* is no longer needed, since the web-based data collection system, implemented in the 2000–01 survey year, automatically tailors data items for institutions based on selected characteristics and screening questions.
- An annual spring collection component (*Graduation Rate*) was added in 1997 to help institutions satisfy the requirements of the Student Right-to-Know Act of 1990. For the 1997–98 GR, 4-year institutions reported on a

1991 cohort, and less than 4-year institutions reported on a 1994 cohort.

- In 1999, NCES collected selected data items in a pilot test of a web-based survey. These items—tuition and fees for entering students, room and board, books and supplies, and information on students receiving financial aid—have been incorporated in the redesigned IPEDS data collection, implemented in 2000–01; the pricing items became part of the fall *Institutional Characteristics* survey, and the student financial aid data became the *Student Financial Aid* component of the winter data collection.
- The *Fall Enrollment in Occupationally Specific Programs (EP)* component was incorporated into the IPEDS program in response to the Carl Perkins vocational education legislation. Conducted biennially in odd-numbered years, this survey collected fall enrollment data on students enrolled in occupationally specific programs at the subbaccalaureate level, by race/ethnicity and gender of student and by fields of study (identified by 6-digit CIP codes). Starting in 1995, total unduplicated counts of students enrolled in these programs were also requested. However, the survey was discontinued as of the 1999–2000 data collection.
- An *Academic Libraries* component, first administered in 1966, was designed to provide concise information on library resources, services, and expenditures for the entire population of academic libraries in the United States. In 1988, the *Academic Libraries* survey became a part of the IPEDS program, being administered biennially in even-numbered years. (From 1966 to 1988, the *Academic Libraries Survey* was conducted on a 3-year cycle.) In September 2000 this survey was removed from the IPEDS data collection but continued to be collected by NCES. After a review of the NCES Academic Libraries Survey (ALS) in 2012, it was determined that the ALS should be reintegrated into the IPEDS survey and was added as a spring survey component for the 2014–15 data collection.
- Prior to the development of the web-based data collection system, the IPEDS survey forms were mailed to institutions based upon the information provided in the prior year’s *Institutional Characteristics* survey: namely, control and highest level of offering (which determined an institution’s sector) and accreditation status. Institutions that were not accredited (and thus not eligible for federal student financial aid), were asked to complete only the *Institutional Characteristics* survey form. However, all accredited institutions that either (1) grant an associate’s or higher degree or (2) offer a certificate program above the baccalaureate level, received a full packet of components—*Institutional*

Characteristics, Completions, Fall Enrollment, Fall Enrollment in Occupationally Specific Programs, Fall Staff, Finance, Graduation Rates, Salaries of Full-Time Instructional Faculty, and Academic Libraries. All other accredited institutions (i.e., those granting only certificates at the subbaccalaureate level) were required to complete *Institutional Characteristics, Graduation Rates,* and a *Consolidated Form.* In 2000, IPEDS was redesigned, and postsecondary institutions that had Title IV Program Participation Agreements with OPE became the primary focus for the full set of data collected by the IPEDS. Thus, the current web-based system considers Title IV status, rather than accreditation.

- In 2000–01, NCES converted the IPEDS to a web-based data collection system. The content of the survey “forms” was revised and reduced in scope, and the procedures for collecting data vary considerably from those used in prior years. In the first year, two collection cycles were implemented: the fall 2000 cycle collected *Institutional Characteristics* and *Completions* data, and the spring 2001 cycle collected *Enrollment, Student Financial Aid, Finance,* and *Graduation Rate* data. In subsequent years, a winter cycle has been included to collect *Human Resources* data.
- In 2005–06, three survey components—*Employees by Assigned Position, Salaries,* and *Fall Staff*—were merged into the single *Human Resources* component to simplify reporting and ensure data consistency and accuracy. The IPEDS glossary and instructions were also restructured, based on the new design, to improve the consistency of reporting between surveys. A few survey items were also reorganized to be more logical in flow.
- In the 2007–08 collection, the *Enrollment* component was separated into two components – *12-Month Enrollment* and *Fall Enrollment.* This allowed the data for the 12 months to be collected earlier in the data collection.
- Beginning with the 2009–10 IPEDS, a new component was added to the spring collection called *200% Graduation Rates (GR200).* This component collects data on the number of students in the cohort who completed their program within 200 percent of normal time. It is separate from the regular *Graduation Rates (GR)* component.
- In 2009–10, numerous changes were made to reduce reporting burden for nondegree-granting institutions. These changes include elimination of items on *IC*; combining data collection on *HR* into a single section with consolidation of 4 primary occupational categories (instruction, research, public service, and combined);

elimination of transfers-in and noncertificate-seeking student columns on *EF*; and vastly simplifying the finance reporting required of these institutions.

- Prior to the 2010–11 data collection, race/ethnicity categories were reported as: Non-resident alien, Race and ethnicity unknown, Black, non-Hispanic, American Indian/Alaska Native, Asian/Pacific Islander, Hispanic, and White, non-Hispanic. However, effective for the 2011–12 collection, all components must use the new race/ethnicity categories of: Nonresident aliens, Race and ethnicity unknown, Hispanics of any race, and for non-Hispanics only, the additional categories of American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White, and Two or more races.
- The 2012–13 IPEDS survey began collecting information on distance education as well as full-time-equivalent enrollment for doctor’s and professional-practice instructional activity. This is also the year that the *Completions* component started collecting information about completers (an unduplicated count of students who receive a degree, diploma, certificate, or other formal award).
- In the 2014–15 IPEDS, the admissions survey items were moved from the *Institutional Characteristics* components to form the *Admissions* component during the winter collection. Additionally, the *Academic Libraries* was added to the spring collection. With the addition of 2 survey components, the calendar was adjusted so that *Graduation Rates* and *200% Graduation Rates* were moved from the spring to the winter.
- Starting with the 2015–16 IPEDS data collection, the *Outcome Measures* component was collected during the winter collection.
- Beginning in the 2016–17 collection year, the *Graduation Rates* cohorts were further disaggregated into the subcohort of students who received a Pell Grant and the subcohort of students who received a subsidized Stafford Loan but did not receive a Pell Grant.

Future Plans

IPEDS plans to continue with three separate data collections (fall, winter, and spring) in future years. Data items and survey components may be modified to reflect current issues in postsecondary education as recommended by the IPEDS Technical Review Panel or as required by law.

5. DATA QUALITY AND COMPARABILITY

Data element definitions have been formulated and tested to be relevant to all providers of postsecondary education and consistent among components of the system. A set of data elements has been established to identify characteristics common to all providers of postsecondary education, and specific data elements have been established to define unique characteristics of different types of providers. Interrelationships among various components of IPEDS have been formed to avoid duplicative reporting and to enhance the policy relevance and analytic potential of the data. Through the use of “clarifying” questions that ask what was or was not included in a reported count or total or the use of context notes that supplement the web collection, it is possible to address problems in making interstate and inter-institutional comparisons. Finally, specialized, but compatible, reporting formats have been developed for the different sectors of postsecondary education providers. This design feature accommodates the varied operating characteristics, program offerings, and reporting capabilities that differentiate postsecondary institutional sectors, while yielding comparable statistics for some common parameters of all sectors.

Sampling Error

Only the data collected prior to 1993 from a sample of private less-than-2-year institutions are subject to sampling error. With this one exception, the HEGIS and the IPEDS programs include the universe of applicable postsecondary institutions.

Nonsampling Error

The IPEDS data are subject to such nonsampling errors as errors of design, reporting, processing, nonresponse, and imputation. To the extent possible, these errors are kept to a minimum by methods built into the survey procedures.

The sources of nonsampling error in the IPEDS data vary with the survey instrument. In the *Fall Enrollment* component, the major sources of nonsampling error are classification problems, the unavailability of needed data, misinterpretation of definitions, and operational errors. Possible sources of nonsampling error in the *Finance* component include nonresponse, imputation, and misclassification. The primary sources of nonsampling error in the *Completions* component are differences between the NCES program taxonomy and taxonomies used by colleges, classification of double majors and double degrees, operational problems, and survey timing. A major source of nonsampling error in the *Graduation Rates* components is the correct identification of cohort students (full-time, first-time, degree/certificate-seeking undergraduates); for *Human Resources*, difficulties in classifying employees by primary occupation; for *12-month Enrollment*, definitional difficulties with calculating instructional activity. For *Student Financial Aid*,

institutions often must merge enrollment and financial aid databases, and face difficulties in placing students in the various groups for which data are collected.

Coverage error. Coverage error in IPEDS is believed to be minimal. For institutions that are eligible for Title IV federal financial aid programs, coverage is almost 100 percent. Schools targeted as “possible adds” are identified from many sources, including a review of the PEPS file from OPE, a universe review done by state coordinators, and the institutions themselves.

Nonresponse error. Since 1993, all institutions entering into PPAs with the U.S. Department of Education are required by law to complete the IPEDS package of components. Therefore, overall unit and item response rates are quite high for all components for these institutions. Data collection procedures, including extensive email and telephone follow-up, also contribute to the high response rates. Imputation is performed to adjust for both partial and total nonresponse to a survey. Because response rates are so high, error due to imputation is considered small.

Unit nonresponse. Because Title IV institutions are the primary focus of IPEDS and they are required to respond, overall response rates for Title IV institutions and administrative units are high. For example, the response rates in the Spring 2018 IPEDS collection were high: greater than 99 percent for each survey component. Since the implementation of the web collection, Title IV institutional response rates for the various IPEDS surveys have ranged from about 89 percent to over 99 percent.

By sector, the response rates are highest for public 4-year or higher institutions and lowest for private for-profit institutions, especially less-than-2-year institutions. The 1994 *Academic Libraries Survey* and the FY 95 *Finance* public-use data files are limited to IHEs because the response rates for postsecondary institutions not accredited at the collegiate level were quite low (specifically: 74 percent in the *Finance* collection and less than 50 percent in the *Academic Libraries Survey*).

Item nonresponse. Most participating institutions provide complete responses for all items. Telephone and email follow-up are used to obtain critical missing items.

Measurement error. NCES strives to minimize measurement error in the IPEDS data by using various quality control and editing procedures. New questionnaire forms or items are field tested and/or reviewed by experts prior to use. To minimize reporting errors in the *Finance* component, NCES uses national standards for reporting finance statistics. Wherever possible, definitions and formats in the *Finance* component are consistent with those in the following publications: *College and University*

Business Administration; Administrative Services, Financial Accounting and Reporting Manual for Higher Education; Audits of Colleges and Universities; and HEGIS Financial Reporting Guide.

The classification of students appears to be the main source of error in the *Enrollment* (especially the fall section that is now a separate component) component. Institutions have had problems in correctly classifying first-time freshmen, other first-time students, and unclassified students for both full-time and part-time categories. These problems occur most often at 2-year institutions (both public and private) and private 4-year institutions. In the 1977–78 HEGIS validation studies, misclassification led to an estimated overcount of 11,000 full-time students and an undercount of 19,000 part-time students. Although the ratio of error to the grand total was quite small (less than 1 percent), the percentage of errors was as high as 5 percent at student detail levels and even higher at certain aggregation levels.

Data Comparability

The definitions and instructions for compiling the IPEDS data have been designed to minimize comparability problems. However, survey changes necessarily occur over the years, resulting in some issues of comparability. Also, postsecondary education institutions vary widely, and hence, comparisons of data provided by individual institutions may be misleading. Specific issues related to the comparability of the IPEDS data are described below.

Classification of institutions. Since 1996, the subset of IPEDS institutions that are eligible to participate in Title IV federal financial student aid has been validated by matching the IPEDS universe with the PEPS file maintained by OPE. Prior to 1996, institutions were identified as aid-eligible from the list of IHEs and responses to the *Institutional Characteristics* component.

Fields of study. In analyzing *Completions* data by field of study, users must remember that the data are reported at the institution level and represent programs, but not schools, colleges, or divisions within institutions. For example, some institutions might have a few computer and information science programs organized and taught within a business school. However, for IPEDS reporting purposes, the degrees are classified and counted within the computer and information science discipline.

Reporting periods. The IPEDS survey is separated into 12 components, which correspond to three seasonal reporting periods. The *Institutional Characteristics*, *Completions*, and *12-month Enrollment* surveys are administered in the fall. The *Student Financial Aid*, *Graduation Rates*, *200% Graduation Rates*, *Outcome Measures*, and *Admissions* components are collected in the winter. The *Fall*

Enrollment, Finance, Academic Libraries, and Human Resources components are administered in the spring.

Survey changes. Over the years, the IPEDS survey forms have undergone revisions that may have an impact on data comparability. Users should consider the following:

- Revisions to the CIP were made in 1970, 1980, 1985, 1990, 2000, and 2010.
- Racial/ethnic data for *Fall Enrollment* have been collected annually since 1990 (biennially, in even-numbered years, before then). Additional items were included on students enrolled in branch campuses in foreign countries, students enrolled exclusively in remedial courses, and students enrolled exclusively at extension divisions; however, these items were discontinued in 2000. Prior to 1996, data were also collected in even-numbered years from 4-year institutions for the fields of Veterinary Medicine and Architecture and Related Programs.
- From 1990 to 1994, racial/ethnic data (by gender and degree/award level) were collected at the 2-digit CIP level on the *Completions* component. In 1995, there was a major restructuring of the component to collect race/ethnicity at the 6-digit CIP level and to add additional questions to collect numbers of completers with double majors and numbers of degrees granted at branch campuses in foreign countries. The additional questions were dropped in 2000–01, but a matrix to collect completions data on multiple majors was instituted for optional use in 2001–02 and became mandatory in 2002–03.
- In fall 1995, the salary class intervals were revised for the *Fall Staff* component. Salary class intervals were revised again in 2001.
- Over the years, the various versions of the *Finance* form have changed. Prior to 1997, the survey forms for public and private institutions were basically the same except that the public institution form contained three additional sections, with data from questions pertaining to state and local government financial entities used by the U.S. Bureau of the Census.
- The *Finance* form for private institutions was revised in 1997 to make it easier for respondents to report their financial data according to new standards issued by the Financial Accounting Standards Board (FASB). In an attempt to address the reporting issues of proprietary institutions, the for-profit form was revised in 1999 to reflect the financial statements of these institutions. Due to new accounting standards issued by the Governmental Accounting Standards Board (GASB), beginning optionally in 2002, with a 2-year phase-in period, public GASB reporting institutions moved from fund-based reporting to whole-entity reporting that is more similar to the private FASB-reporting institutions.
- With the web-based data collection in 2000–01, the number of data items requested from institutions was greatly reduced.
- Salary outlays, total number of instructional staff, and tenure status were collected for full-time staff on less than 9-month contract schedules through 1999–2000; currently only academic rank and gender are collected for these other contract schedules. Faculty status was not collected between 2001–02 and 2004–05, and was reinstated for degree-granting institutions in 2005–06. The reporting of data by faculty status was optional for 2005–06, but was required beginning in 2006–07. Beginning with the 2004–05 data collection, only degree-granting institutions have been required to complete the *SA* section of the *HR* component.
- Prior to 2000–01, the *Graduation Rates* component collected additional data on students' length of time to complete; the number of students still persisting; and the number of students receiving athletically related student aid and their length of time to complete. The sections of the component collecting data on students receiving athletically related student aid were discontinued with the 2007–08 data collection.
- Prior to 2001, the *Fall Staff* component requested the number of persons donating (contributing) services or contracted for by the institution.
- As of the 2004–05 collection, IPEDS has limited the collection of data on employees in medical schools to institutions with an M.D. and/or D.O. program. In previous collections, all 4-year institutions were given the opportunity to report employees in medical schools. However, some institutions that did not have a medical school erroneously reported employees in this section of the *Employees by Assigned Position* section. This change may cause some discrepancies in comparisons of the IPEDS medical school data.
- Accreditation information was collected in the *IC* component until 2006–07, when the Office of Postsecondary Education opened its database and searchable web tool of accredited institutions (<https://ope.ed.gov/accreditation/>), collecting data from the accreditation agencies.
- A 2-year phase-in period began with the 2008–09 collection to implement additional changes to better align the finance reporting of public and private

institutions. Since the 2010–11 collection, all public and nonprofit institutions have used the newly-aligned form. Starting in 2014–15, private-for-profits started to report *Finance* data more like the public and private non-for-profit institutions.

- The 2008–09 data collection was the start of a 3-year phase-in to the reporting of the new, 1997 federal race and ethnicity categories. The new categories allow students and staff to identify themselves using two or more race categories. The transition to the new race and ethnicity categories was required for the 2010–11 data collection of the *Fall Enrollment* and *Human Resources* components, and was required for all other IPEDS components as of the 2011–12 data collection.
- The 2008–09 data collection was the start of a 2-year phase-in of the restructuring of the postbaccalaureate degree categories. As of the 2010–11 data collection, the first-professional degree and certificate categories were eliminated, and the doctor’s degree category was expanded to three categories: research/scholarship, professional practice, and other. These changes reflect changes in graduate education over the years, and make it easier to distinguish research-focused doctor’s degrees from professionally-focused doctor’s degrees.
- In 2009–10, forms used to collect *GR* data for less than 4-year institutions were modified to include reporting of completers within 100 percent of normal time in addition to 150 percent of normal time. This change aligned forms for the less than 4-year institutions with the 4-year institutions’ forms.
- For the 2009–10 data collection, additional changes to the SFA component were implemented due to the 2008 Higher Education Opportunity Act (HEOA) and for clarification, including the collection of average aid amounts for sub-groups of the full-time, first-time degree/certificate-seeking undergraduate population, to be used in the calculation of average institutional net price and average institutional net price by income category information for display on the College Navigator website (<https://nces.ed.gov/collegenavigator/>).
- In 2014–15, the *SFA* component began collecting data on undergraduate and graduate students receiving military service members and veterans benefits.

History of Classification of Instructional Programs. The purpose of the Classification of Instructional Programs (CIP) is to provide a taxonomic scheme that supports the accurate tracking, assessment, and reporting of fields of study and program-completions activity. NCES has

utilized a number of versions of CIP throughout the life of IPEDS, as well as its predecessor, HEGIS.

In 1970, NCES published *A Taxonomy of Instructional Programs in Higher Education* that was to be used beginning with the HEGIS surveys of 1971–72. This taxonomy was divided into two main sections: one dealt with conventional academic subdivisions of knowledge and training; the other dealt with technologies and occupational specialties related to curricula leading to associate’s degrees and other awards below the baccalaureate. Both sections used 4-digit numerical codes to represent the fields.

In 1981, NCES published *A Classification of Instructional Programs*. In addition to new programs that evolved or gained new significance since 1970, there were weaknesses in the way instructional programs were classified and disaggregated. The new CIP instituted the current 6-digit code, which allowed obtaining data by 2-digit or 4-digit groups of fields more easily than the older scheme. The new CIP also included program definitions or descriptions that the 1970 version lacked, as well as other improvements.

In 1985, another revision to the CIP was released, although this was more of an update to the 1980 CIP than a radical change. There were 116 fields deleted, either due to duplication or because programs no longer existed to the degree needed for national reporting. Forty fields were added based on write-in entries on surveys returned. In addition, there were a few revisions of codes or names of fields. This CIP was used during the final years of HEGIS and continued into IPEDS.

A more extensive revision of CIP was released in 1990, which included programs at the secondary and adult education levels. Within the postsecondary level, there were several major restructures. Fields previously included in Business and Management (06) and Business (Administrative Support) (07) were integrated into a new Business Management and Administrative Support (52). Similarly, fields previously in Allied Health (17) and Health Sciences (18) were integrated into Health Professions and Related Sciences (51). Again there were deletions and additions, although many were actually combining two former fields into one, or vice versa. The 1990 CIP was first used in IPEDS in 1991–92.

A further revision resulted in publishing *Classification of Instructional Programs: 2000 Edition* in 2002. This CIP was adopted as the standard field of study taxonomy by Statistics Canada, based on the comprehensiveness and detail of the CIP and the potential for enhanced comparability with U.S. education data. Again, there were several major reorganizations. Fields previously reported in Agricultural Sciences (02) were divided between

Agriculture, Agriculture Operations and Related Sciences (01) and Biological and Biomedical Sciences (26). Fields previously reported in Sales and Marketing Operations/Marketing and Distribution (08) were incorporated into Business, Management, Marketing, and Related Services (52). History became a separate 2-digit CIP (54) moved from Social Sciences and History (45). In addition, there were a large number of new fields added. The CIP-2000 was first used in IPEDS in 2002–03.

The web-based version of CIP was implemented during 2008–09, and is accessible online at <https://nces.ed.gov/ipeds/cipcode/>. The web-based CIP incorporates tools for browsing, searching, and crosswalking. Several additional changes were implemented in conjunction with this online version: 50 new 4-digit codes and 300 new 6-digit codes were added, and several series were reorganized (English Language and Literature/Letters (23), Psychology (42), Nursing (51.16), and Residency Programs (60)). One series was also deleted (Technology Education/Industrial Arts (21)), and several examples of instructional programs were added to assist users in selecting the appropriate field. These revisions have been utilized in IPEDS since 2010–11.

Comparisons with HEGIS. Caution must be exercised in making cross-year comparisons of institutional data collected in IPEDS with data collected in HEGIS. IPEDS surveys request separate reporting by all institutions and their branches as long as each entity offers at least one complete program of study. Under HEGIS, only separately accredited branches of an institution were surveyed as separate entities; branches that were not separately accredited were combined with the appropriate entity for the purposes of data collection and reporting. Therefore, an institution may have several entities in IPEDS, where only one existed in HEGIS.

Comparison with the Survey of Earned Doctorates. Like the IPEDS *Completions* survey, the Survey of Earned Doctorates (SED; for more information, see the SED chapter) also collects data on doctoral degrees, but the information is provided by doctorate recipients rather than by institutions. The number of doctorates reported in the *Completions* component is slightly higher than in SED. This difference is largely attributable to the inclusion of nonresearch doctorates (primarily in theology and education) in the *Completions* component. The discrepancies in counts have been generally consistent since 1960, with ratios of the IPEDS-to-SED counts ranging from 1.01 to 1.06. Differences in the number of doctorates within a given field may be greater than the overall difference because a respondent to SED may classify his or her specialty differently from the way in which the institution reports the field in the *Completions* survey.

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7. METHODOLOGY AND EVALUATION REPORTS

General

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