

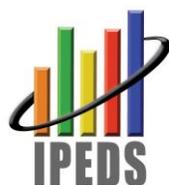
# 2016–17 Integrated Postsecondary Education Data System (IPEDS) Methodology Report

# 2016–17 Integrated Postsecondary Education Data System (IPEDS) Methodology Report

**JULY 2017**

**Scott A. Ginder**  
**Janice E. Kelly-Reid**  
**Farrah B. Mann**  
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**Content Contact**

Aurora D'Amico

(202) 502-7334

[aurora.damico@ed.gov](mailto:aurora.damico@ed.gov)

## Foreword

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This report describes the universe, methods, and editing procedures used in the 2016–17 Integrated Postsecondary Education Data System (IPEDS) data collection. IPEDS data consist of basic statistics on postsecondary institutions regarding tuition and fees, number and types of degrees and certificates conferred, number of students applying, number of students enrolled, number of employees, financial statistics, graduation rates, student financial aid, and academic libraries. Institutions submitted these data during three reporting periods corresponding to fall 2016, winter 2016–17, and spring 2017. Information provided in this report is applicable to the full 2016–17 IPEDS collection year; response rates and specific information on data collected during a particular collection period are included in the *First Look* report specific to that collection period.

We hope that the information provided in this report will be useful to interested readers and encourage researchers to make full use of the IPEDS data for analysis, to perform comparisons of peer institutions, or to help answer questions about postsecondary education institutions. Additional information about IPEDS is available on the Web at <http://www.nces.ed.gov/ipeds>.

**Ross Santy**  
*Associate Commissioner*  
*Administrative Data Division*

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## Acknowledgments

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The authors of this report appreciate the efforts made by officials at individual institutions and by state or jurisdiction coordinators for the Integrated Postsecondary Education Data System (IPEDS) to provide quality data in a timely fashion. In addition, the assistance of these persons in resolving questions about the data was invaluable.

The U.S. Department of Education, National Center for Education Statistics (NCES), and the Office for Civil Rights, with the approval of the Office of Management and Budget, cooperate in the collection of racial/ethnic and gender information from all postsecondary institutions that participate in the *Fall Enrollment*, *Completions*, *Human Resources*, and *Graduation Rates* components of the IPEDS survey. In this collaboration, data provided by postsecondary institutions are designated as Compliance Reports pursuant to the Civil Rights Act of 1964 (34 CFR 100.6[b]).

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## Introduction

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The Integrated Postsecondary Education Data System (IPEDS) collects institution-level data from postsecondary institutions in the United States (50 states and the District of Columbia) and other U.S. jurisdictions.<sup>1</sup> IPEDS defines a postsecondary institution as an organization that is open to the public and has the provision of postsecondary education or training beyond the high school level as one of its primary missions. This definition includes institutions that offer academic, vocational, and continuing professional education programs and excludes institutions that offer only avocational (leisure) and adult basic education programs. Definitions for other terms used in this report may be found in the IPEDS online glossary located at <https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx>.

IPEDS provides basic statistics on postsecondary institutions regarding tuition and fees, number and types of degrees and certificates conferred, number of students applying and enrolled, number of employees, financial statistics, graduation rates, student financial aid, and academic libraries. The Higher Education Amendments of 1992 make the submission of data to IPEDS mandatory for any institution that participates in or is an applicant for participation in any federal financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended. All components of IPEDS are mandatory; consequently, IPEDS response rates for each component are nearly 100 percent. The resulting database is used as the principal sampling frame for other postsecondary surveys.

The IPEDS survey is separated into 12 components, which correspond to three seasonal reporting periods. The fall data collection period consists of the *Institutional Characteristics*, *Completions*, and *12-Month Enrollment* survey components. The winter data collection consists of the *Student Financial Aid*, *Graduation Rates*, *200 Percent Graduation Rates*, *Admissions*, and *Outcome Measures* components, and the spring collection consists of the *Fall Enrollment*, *Finance*, *Human Resources*, and *Academic Libraries* components.

The 2016–17 IPEDS survey was a web-based data collection. As respondents entered data, the data collection system automatically calculated totals, averages, and percentages and compared the responses with the 2015–16 submission for the same institution to ensure the data were consistent. The system also compared reported data with other related values reported during 2016–17 to ensure consistency of reporting within each survey component and across the data collection program. If data were still missing following the edit checks, or if an institution (unit) had not responded to a survey component, analysts conducted imputations to ensure a complete database was available for analysis.

IPEDS provides users with access to IPEDS preliminary data soon after the close of data collection. Preliminary data have not been extensively reviewed or edited. Provisional data for a collection, containing fully reviewed, edited, and imputed data, are released approximately

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<sup>1</sup> The other U.S. jurisdictions surveyed in IPEDS 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.

3 months after the preliminary data. Final data for each component, including revisions to the provisional data submitted by institutions after the close of data collection, are available at the time of the preliminary data release during the next collection year (2017–18).

## Universe and Institutions Surveyed

The IPEDS universe is established during the fall collection period. For 2016–17, a total of 6,834 Title IV<sup>2</sup> postsecondary entities (6,760 institutions and 74 administrative offices) were identified via several sources, including a universe review by state or jurisdiction coordinators, a review of the Postsecondary Education Participation System (PEPS) data file maintained by the Office of Postsecondary Education, and information provided by the institutions themselves. The four U.S. service academies that are not Title IV eligible are included in the IPEDS universe because they are federally funded and open to the public.<sup>3</sup>

Table 1 provides the number and percentage distribution of the Title IV institutions identified for participation in the 2016–17 IPEDS survey, by control of institution, level of institution, and the region where the institution is located. The actual number of institutions and administrative offices required to complete individual components of IPEDS varies based on the characteristics of the individual entities and is provided in the *First Look* report that describes data from that component.

Two hundred eighteen postsecondary institutions included in prior IPEDS data collections were outside the scope of IPEDS in 2016–17 because they were closed, merged with another institution, or no longer offered postsecondary programs. Additionally, 445 postsecondary institutions were reported exclusively by a parent institution<sup>4</sup> and are not included in the universe counts; on the other hand, a review of PEPS added 129 postsecondary institutions to the universe. Table 2 highlights changes to the IPEDS universe between 2015–16 and 2016–17 by displaying the number of Title IV institutions, those changing Title IV status from 2015–16 to 2016–17, those changing level or control of institution from 2015–16 to 2016–17, and the percentage change, disaggregated by level and control of institution. Institutions included in the “Number changing Title IV status in 2016–17” column of table 2 are those that participated in Title IV programs during 2015–16 but whose status changed in 2016–17. Reasons for changing Title IV status include, but are not limited to, closure, loss of eligibility to provide federally funded financial assistance, and combining or merging with another institution. Institutions included in the “Number changing Title IV status since 2015–16” column of table 2 are those that participated in Title IV programs during 2016–17 but were not participants in 2015–16. These institutions may be new, may have begun offering Title IV aid for the first time, or may have regained eligibility to offer federally funded financial assistance after a period of ineligibility. The table 2 columns “Number changing level or control of institution in 2016–17”

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<sup>2</sup> Institutions participating in Title IV programs are accredited by an agency or organization recognized by the Secretary of the U.S. Department of Education, have a program of more than 300 clock hours or 8 credit hours, have been in business for at least 2 years, and have a signed Program Participation Agreement with the Office of Postsecondary Education, U.S. Department of Education.

<sup>3</sup> The four U.S. service academies that are not Title IV eligible are the U.S. Naval Academy, the U.S. Military Academy, the U.S. Coast Guard Academy, and the U.S. Air Force Academy. The U.S. Merchant Marine Academy is Title IV eligible. Data for all five institutions are included in the tables and counts of institutions unless otherwise indicated.

<sup>4</sup> A parent institution reports data for another institution, known as the child institution.

and “Number changing level or control of institution since 2015–16” quantify year-to-year changes in institutional characteristics other than Title IV status.

**Table 1. Number and percentage distribution of Title IV institutions, by control of institution, level of institution, and region: United States and other U.S. jurisdictions, academic year 2016–17**

Level of institution and region	Number of institutions				Percentage of institutions			
	Total	Public	Private		Total	Public	Private	
			Nonprofit	For-profit			Nonprofit	For-profit
<b>Total institutions</b>	<b>6,760</b>	<b>1,985</b>	<b>1,876</b>	<b>2,899</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Total U.S. institutions	6,606	1,958	1,823	2,825	97.7	98.6	97.2	97.4
Level of institution								
4-year	2,918	755	1,634	529	43.2	38.0	87.1	18.2
U.S.	2,839	737	1,588	514	42.0	37.1	84.6	17.7
Other U.S. jurisdictions	79	18	46	15	1.2	0.9	2.5	0.5
2-year	1,995	990	163	842	29.5	49.9	8.7	29.0
U.S.	1,969	981	158	830	29.1	49.4	8.4	28.6
Other U.S. jurisdictions	26	9	5	12	0.4	0.5	0.3	0.4
Less-than-2-year	1,847	240	79	1,528	27.3	12.1	4.2	52.7
U.S.	1,798	240	77	1,481	26.6	12.1	4.1	51.1
Other U.S. jurisdictions	49	0	2	47	0.7	0.0	0.1	1.6
Region								
New England	388	109	157	122	5.7	5.5	8.4	4.2
Mid East	1,082	275	410	397	16.0	13.9	21.9	13.7
Great Lakes	968	264	287	417	14.3	13.3	15.3	14.4
Plains	570	187	184	199	8.4	9.4	9.8	6.9
Southeast	1,665	541	394	730	24.6	27.3	21.0	25.2
Southwest	721	241	113	367	10.7	12.1	6.0	12.7
Rocky Mountains	266	81	43	142	3.9	4.1	2.3	4.9
Far West	941	255	235	451	13.9	12.8	12.5	15.6
U.S. service academies	5	5	0	0	0.1	0.3	0.0	0.0
Other U.S. jurisdictions	154	27	53	74	2.3	1.4	2.8	2.6

NOTE: Title IV institutions are those with a written agreement with the U.S. Department of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs. The four U.S. service academies that are not Title IV eligible are included in the Integrated Postsecondary Education Data System (IPEDS) universe because they are federally funded and open to the public. Percentages in the columns of this table use the corresponding count in the Total institutions row as the denominator. Data are not imputed. The item response rates for all cells in this table are 100 percent. The New England region includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Mid East region includes Delaware, the District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. The Great Lakes region includes Illinois, Indiana, Michigan, Ohio, and Wisconsin. The Plains region includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The Southeast region includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The Southwest region includes Arizona, New Mexico, Oklahoma, and Texas. The Rocky Mountains region includes Colorado, Idaho, Montana, Utah, and Wyoming. The Far West region includes Alaska, California, Hawaii, Nevada, Oregon, and Washington. The other U.S. 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. Detail may not sum to totals because of rounding. Definitions for terms used in this table may be found in the IPEDS online glossary located at <https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS, Fall 2016, Institutional Characteristics component (preliminary data).

**Table 2. Number of Title IV institutions, number changing Title IV status, and percentage change, by level and control of institution: United States and other U.S. jurisdictions, academic years 2015–16 and 2016–17**

Level and control of institution	Title IV institutions in 2015–16			Title IV institutions in 2016–17			Percentage change in number of Title IV institutions from 2015–16 to 2016–17
	Number	Number changing Title IV status in 2016–17	Number changing level or control of institution in 2016–17	Number	Number changing Title IV status since 2015–16	Number changing level or control of institution since 2015–16	
<b>All institutions</b>	<b>7,177</b>	<b>551</b>	<b>106</b>	<b>6,760</b>	<b>134</b>	<b>106</b>	<b>-5.8</b>
Public	1,992	14	0	1,985	6	1	-0.4
Private nonprofit	1,913	61	3	1,876	26	1	-1.9
Private for-profit	3,272	476	1	2,899	102	2	-11.4
4-year	3,089	225	10	2,918	30	34	-5.5
Public	728	0	1	755	1	27	3.7
Private nonprofit	1,647	32	1	1,634	18	2	-0.8
Private for-profit	714	193	9	529	11	6	-25.9
2-year	2,085	110	55	1,995	29	46	-4.3
Public	1,016	2	32	990	2	6	-2.6
Private nonprofit	178	17	6	163	5	3	-8.4
Private for-profit	891	91	20	842	22	40	-5.5
Less-than-2-year	2,003	216	37	1,847	75	22	-7.8
Public	248	12	5	240	3	6	-3.2
Private nonprofit	88	12	2	79	3	2	-10.2
Private for-profit	1,667	192	30	1,528	69	14	-8.3

NOTE: Title IV institutions are those with a written agreement with the U.S. Department of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs. The four U.S. service academies that are not Title IV eligible are included in the Integrated Postsecondary Education Data System (IPEDS) universe because they are federally funded and open to the public. An institution may be classified as changing Title IV status because it: closed, no longer provides federally funded financial assistance, lost Title IV eligibility, combined or merged with another institution, is new, began to provide federally funded financial assistance, or regained Title IV eligibility. The other U.S. jurisdictions include 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. Definitions for terms used in this table may be found in the IPEDS online glossary located at <https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS, Fall 2015 and Fall 2016 Institutional Characteristics components (preliminary data).

According to Section 490 of the Higher Education Amendments of 1992 (P.L. 102-325), IPEDS is mandatory for any institutions that participate in or are applicants for participation in any federal financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended (20 USC 1094[a][17]). In addition to the mandatory participants, the IPEDS database also includes institutions that do not participate in Title IV financial aid programs. These institutions may participate in the IPEDS data collection program, and if they voluntarily respond to the surveys, the institutions are included in the College Navigator (<http://nces.ed.gov/collegenavigator>). The College Navigator is designed to help college students, prospective students, and their parents learn about admission requirements, degrees offered, costs, graduation rates, and other characteristics of institutions that they may find helpful in selecting among postsecondary institutions.

## Survey Components

### Institutional Characteristics

The *Institutional Characteristics* component of the IPEDS survey collected basic data on each institution, such as institution name, location, educational offerings, opportunities for distance education, control or affiliation, admission requirements, estimated fall enrollment, and student services. It also collected data on student charges for academic year 2016–17 for both levels of enrollment (undergraduate and graduate) or for the institution’s six largest programs (if programs are primarily occupational/vocational). Finally, this component requested the cost of attendance for full-time, first-time degree- or certificate-seeking undergraduate students, which includes tuition and fees, books and supplies, room and board, and other expenses (such as transportation, laundry, and entertainment). Cost data are those that the institutions’ financial aid offices use to determine student aid. Undergraduate student charges data, which are the averages for all full-time undergraduates, may differ from institutional cost data, which are limited to full-time, first-time degree/certificate-seeking students.

### Completions

The *Completions* component collected data on the number of degrees or other formal awards conferred between July 1, 2015, and June 30, 2016. It also collected data on the counts of awards conferred, by award level, race/ethnicity, gender, and 6-digit Classification of Instructional Programs<sup>5</sup> (CIP) code. The component collected the number of awards conferred with multiple majors, by 6-digit CIP code, degree level, race/ethnicity, and gender, from institutions that confer degrees or certificates with multiple majors. The data collection system generated summaries by award level, race/ethnicity, and gender based on the first two digits of the CIP code. CIP code information is based on the 2010 version of the CIP codes.

In addition to the number of degrees and certificates conferred, this component also collected the number of students receiving degrees or certificates, by gender, race/ethnicity, age, and award level. The student count data from this component reflect students receiving formal awards between July 1, 2015, and June 30, 2016.

### 12-Month Enrollment

The *12-Month Enrollment* component collected unduplicated headcount enrollment and instructional activity data for the 12-month reporting period July 1, 2015, through June 30, 2016. It collected the student counts by race/ethnicity, gender, and level of student for those students enrolled during the reporting period. Institutions reported students who attended at different levels within the 12-month period at the highest level at which the student was enrolled. This component also collected data on instructional activity for the reported students and generated the full-time equivalent (FTE) undergraduate student enrollment and FTE graduate student enrollment from the reported instructional activity. While the unduplicated headcount of

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<sup>5</sup> Additional information on the Classification of Instructional Programs can be found at <http://nces.ed.gov/ipeds/cipcode>.

graduate students included those enrolled in doctor's degrees—professional practice<sup>6</sup> programs, the instructional activity collected for graduate students did *not* include instructional activity for doctor's degrees—professional practice students. A separate item directly collected FTE for doctor's degrees—professional practice students; this FTE was combined with the instructional activity-based graduate student FTE when reporting total graduate student FTE.

### **Student Financial Aid**

The *Student Financial Aid* component primarily collected data on the number of full-time, first-time degree/certificate-seeking undergraduate financial aid recipients and the associated aid amounts for the 2015–16 academic year. This component was divided into seven parts: a section to establish student count totals for subsequent parts (Part A); sections on financial aid for all undergraduates (Part B); full-time, first-time undergraduates (Part C); full-time, first-time undergraduates receiving any type of grant aid (Part D); and full-time, first-time undergraduates receiving Title IV federal aid (Part E); and sections on net price of attendance for full-time, first-time undergraduates receiving any type of grant aid (Part F); and full-time undergraduates receiving Title IV federal aid (Part G).

The component collected data based on the 2015–16 academic year for those institutions that were part of the IPEDS universe and indicated that they enrolled undergraduate students in 2015–16. The basis for student counts was the fall 2015 enrollment or unduplicated counts for 2015–16, and institutions that charge differing tuition based on residency were asked to provide student counts by in-district, in-state, and out-of-state residency status. Parts B and C collected some similar information, but for different subsets of students. Part B collected student counts and aid totals for overall grant aid, Pell grant aid, and federal student loans for all undergraduate students. Part C collected student counts and aid totals for Pell grants, other federal grants, total federal grants, state/local grants, institutional grants, federal loans to students, other loans to students, and total loans to students for full-time, first-time undergraduate students. Prior to collecting parts D and E, which collected data relevant to the calculation of net price of attendance for full-time, first-time undergraduate students, any revisions to prior year cost of attendance data were collected. Part D collected student counts by residency (on campus, off campus, and off campus with family), as well as total grant and scholarship aid. Part E, like Part D, collected student counts by residency and total grant and scholarship aid; in addition, Part E collected student counts and total grant and scholarship aid by income level. Parts D and E asked public institutions to report only on students paying in-state tuition and fees. Private institutions were asked to report on all full-time, first-time students meeting the criteria for inclusion in the relevant part. Parts F and G did not collect any additional data. Instead, they displayed the calculated net price of attendance for students reported in parts D and E and allowed institutions to provide comments for contextualizing the net prices.

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<sup>6</sup> Doctor's degrees—professional practice are conferred upon completion of a program providing the knowledge and skills for the recognition, credential, or license required for professional practice and may include Chiropractic (D.C. or D.C.M.); Dentistry (D.D.S. or D.M.D.); Law (J.D.); Medicine (M.D.); Optometry (O.D.); Osteopathic Medicine (D.O.); Pharmacy (Pharm.D.); Podiatry (D.P.M., Pod.D., D.P.); Veterinary Medicine (D.V.M.); and others, as designated by the awarding institution.

## Graduation Rates

The *Graduation Rates* component collected the number of students entering the institution as full-time, first-time degree/certificate-seeking students in a particular year (cohort) by race/ethnicity and gender; the number of students in the cohort who completed their program within 150 percent of normal time to completion (e.g., “normal” program completion time for a bachelor’s degree would be 4 years); the number who transferred to other institutions; and the number of cohort exclusions.<sup>7</sup> In addition, the *Graduation Rates* component collected the total number of students completing their program on time (within 100 percent of normal time to completion). 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.<sup>8</sup>

This component was developed to help institutions comply with requirements of the Student Right-to-Know Act. In 2016–17, for 4-year institutions, the cohort consisted of those students who first started in the 2010–11 academic year; and for 2-year and less-than-2-year institutions, the cohort was those students starting in the 2013–14 academic year. Institutions operating on standard academic terms (semester, trimester, quarter, or 4-1-4) reported on a fall cohort; all other institutions reported on a full 12-month cohort (September 1 through August 31).

### 200 Percent Graduation Rates

The *200 Percent Graduation Rates* component was designed to combine information reported in a prior collection via the *Graduation Rates* component with current information about the same cohort of students. From previously collected data, the data collection system obtained the number of students entering the institution as full-time, first-time degree/certificate-seeking students in a cohort year; the number of students in this cohort completing within 100 and 150 percent of normal program completion time (e.g., “normal” program completion time for a bachelor’s degree would be 4 years); and the number of cohort exclusions. Then the component collected the count of additional cohort exclusions and additional program completers between 151 and 200 percent of normal program completion time. 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. For 4-year institutions, the information collected was limited to bachelor’s-seeking students, while less-than-4-year institutions reported on the entire cohort. Institutions operating on standard academic terms (semester, trimester, quarter, or 4-1-4) reported on a fall cohort; all other institutions reported on a full 12-month cohort (September 1 through August 31).

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<sup>7</sup> Allowable exclusions include those students who died or were totally and permanently disabled; students who left school to serve in the armed forces (or were called up to active duty); those who left to serve with a foreign aid service of the federal government, such as the Peace Corps; and those who left to serve on official church missions.

<sup>8</sup> Inclusion in the subcohorts is determined by aid received at the time of entry to the institution, regardless of aid received (or not received) in subsequent enrollment periods.

## **Outcome Measures**

The *Outcome Measures* component collected data from degree-granting institutions on the award and enrollment status for four cohorts of undergraduate degree/certificate-seeking students. The four student cohorts were as follows:

- full-time, first-time entering students;
- part-time, first-time entering students;
- full-time, non-first-time entering students; and
- part-time, non-first-time entering students.

For the 2016–17 winter collection, the *Outcome Measures* cohorts consisted of students who first started at the reporting institution during the 2008–09 academic year; institutions operating on standard academic terms (semester, trimester, quarter, or 4-1-4) reported on a fall 2008 cohort, and all other institutions reported on a full 12-month cohort (September 1, 2008, through August 31, 2009). Both 4-year and 2-year institutions reported on the same cohort year. Student completion status was collected as of 6 years after students entered the institution (August 31, 2014). In addition, enrollment and completion status were collected as of 8 years after students entered the reporting institution (August 31, 2016). For the purposes of the *Outcome Measures* component, institutions reported the number of students in the cohort who completed an award at the institution, remained enrolled at the reporting institution, left the reporting institution and enrolled at another institution, or were excluded from the cohort. The number of students in the cohort who did not receive an award, were no longer enrolled at the reporting institution, and did not enroll elsewhere was calculated from the reported fields.

## **Admissions**

The *Admissions* component of IPEDS collects information about the selection process for entering first-time degree/certificate-seeking undergraduate students. Data obtained from institutions includes admissions considerations (e.g., secondary school records, admission test scores), the number of first-time degree/certificate-seeking undergraduate students who applied, the number admitted, and the number enrolled. *Admissions* data are collected only from institutions that do not have an open admissions policy for entering first-time students. Data collected are from the fall 2016 reporting period.

## **Fall Enrollment**

The *Fall Enrollment* component had six separate parts: A through F. Institutions operating on a traditional academic year calendar (semester, trimester, quarter, or 4-1-4) reported parts A, B, C, and D as of the institution's official fall reporting date or October 15, whichever came first. Institutions operating on a nontraditional (other) academic calendar, a calendar that differs by program, or a calendar that enrolls students on a continuous basis reported fall enrollment using parts A, B, C, and D for students enrolled any time during the period from August 1 to October 31.

Part A collected the number, race/ethnicity, gender, and enrollment status (full- or part-time) of students enrolled in the fall, including the number who were first-time degree/certificate-seeking undergraduate students; the number who were degree/certificate-seeking undergraduates; total undergraduates; and total graduate students. In addition, Part A collected data 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 same state or jurisdiction as the institution; in a different state or jurisdiction as the institution; outside the United States, or unknown). Part B (which is optional this year but is required when data correspond to the fall of an odd-numbered year) collected the number, age category, gender, and enrollment status of undergraduate and graduate students enrolled in the fall. Part C (which was required this year, but is optional when data correspond to the fall of an odd-numbered year) collected summary data on the residence of first-time degree/certificate-seeking undergraduate students and the number of those students enrolled in the fall who completed high school in the last 12 months, by state or other U.S. jurisdiction of residence. Part D collected data on the total number of undergraduate students who entered the institution for the first time in the fall term. This included both full-time and part-time undergraduate students new to the institution, whether degree/certificate-seeking or not, and any students who transferred into the institution.

Part E collected data on retention rates, which quantify the proportion of the first-time student population enrolled during fall 2015 who returned to the same institution in fall 2016. Four-year institutions reported retention data for full-time, first-time bachelor's-seeking undergraduate students and for part-time, first-time bachelor's-seeking undergraduate students. Less-than-4-year institutions reported retention data for all full-time, first-time degree/certificate-seeking students and for all part-time, first-time degree/certificate-seeking students.

Part F requested an estimated undergraduate program student-to-faculty ratio. The data collection instrument included a worksheet to assist the institution in calculating the ratio requested.

## **Finance**

The *Finance* component collected summary data on each institution's financial status for the most recent fiscal year ending prior to October 2016, including amounts of revenues and expenses (by type of revenue or expense), changes in net assets, and amounts of scholarships and fellowships. Different versions of the *Finance* component were available based mainly on control of the institution: public, private nonprofit, and private for-profit. Public institutions chose between two versions of the component depending on which standards they used for their internal accounting: (1) Governmental Accounting Standards Board (GASB) Statements 34 and 35 reporting standards or (2) Financial Accounting Standards Board (FASB) reporting standards.<sup>9</sup>

Public institutions that used GASB reporting standards to prepare their financial statements reported data on statement of net assets, plant, property, and equipment (Part A), revenues and other additions (Part B), expenses and other deductions (Part C), summary of changes in net assets (Part D), scholarships and fellowships (Part E), and endowment assets (Part H). Additionally, they reported certain data for the U.S. Census Bureau, including revenue data (Part J), expenditure data (Part K), and debts and assets (Part L).<sup>10</sup>

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<sup>9</sup> Due to differences between GASB standards and FASB standards, figures from public institutions are not comparable to figures from private institutions, even in categories with identical labels.

<sup>10</sup> Institutions no longer report data on component units (formerly parts F and G).

Nonprofit institutions and public institutions that use FASB reporting standards to prepare their financial statements reported data on their statement of financial position (Part A), summary of changes in net assets (Part B), scholarships and fellowships (Part C), revenues and investment return (Part D), expenses by functional and natural classification (Part E), and endowment assets (Part H).

For-profit institutions used a form that is similar to the nonprofit form, but adjusted to account for differences between nonprofit and for-profit institutions (e.g., restricted/unrestricted status of revenues was not collected from for-profit institutions). For-profit institutions reported data on balance sheet information (Part A), summary of changes in equity (Part B), student grants (Part C), revenues and investment return (Part D), expenses by function (Part E), and income tax expenses (Part F).

### **Human Resources**

The *Human Resources* component of IPEDS, which has eight distinct but related parts (labeled A through H), collected data on the number of staff on the institution's payroll as of November 1, 2016. Not all institutions had to complete all eight parts: degree-granting institutions with 15 or more full-time staff completed all parts; degree-granting institutions with fewer than 15 full-time staff completed parts A, B, C, and G; and non-degree-granting institutions completed parts A, B, and C.

The following parts constitute the *Human Resources* component:

- **Part A—Full-time instructional staff:** Collected the number of full-time instructional staff by tenure status, academic rank, race/ethnicity, and gender.
- **Part B—Full-time noninstructional staff:** Collected the number of full-time noninstructional staff by occupational category, tenure status, race/ethnicity, and gender.
- **Part C—Summary of full-time staff.**
- **Part D—Part-time staff:** Collected the number of part-time staff by occupational category, race/ethnicity, and gender.
- **Part E—Part-time staff:** Collected the number of part-time staff by occupational category, tenure status, and medical school status.
- **Part F—Summary of part-time staff.**
- **Part G—Salary worksheet and salary outlays for full-time nonmedical instructional staff:** Collected the number of full-time nonmedical instructional staff by length of contract and occupational category.
- **Part H—Number of newly hired full-time permanent staff:** Collected the number of newly hired full-time permanent staff by tenure status, race/ethnicity, and gender.

Data in Part C (total number of full-time staff) consist of a summary of Parts A and B, and the data collection system automatically generated these data from the appropriate details. Likewise, data in Part F (part-time staff) summarize the data reported in Parts D and E, and the system generated the appropriate sums. Beginning in collection year 2016–17 and each year after, the reporting of data by race/ethnicity and gender is required.

## Academic Libraries

The *Academic Libraries* component collected information from degree-granting institutions on library collections, expenditures, and services for the fiscal year. Fiscal year 2016 is defined as the most recent 12-month period that ends before October 1, 2016, and corresponds with the institution's fiscal year. Institutions answered a screening question within the *Institutional Characteristics* component that determined the requirement to complete the *Academic Libraries* component and the correct section to complete. The *Academic Libraries* 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 collected additional expenditures information. Section I collected data on the interlibrary loan services, library collections, and circulation numbers including physical books, media, serials, digital or electronic books (including government documents); digital or electronic databases; digital or electronic media; and digital or electronic serials. Section II collected data on expenditures including library staff wages and fringe benefits, materials and service costs, and operations and maintenance expenditures. Institutions with no library expenditures were not required to respond to the *Academic Libraries* component.

## Survey Procedures

The 2016–17 IPEDS survey was a web-based data collection. Each institution appointed a keyholder who was responsible for ensuring that the institutions' submitted survey data were correct and complete. The keyholder could generate UserIDs and passwords for up to six additional survey respondents who could also enter or review data. For many institutions, keyholders also edited and “locked” the data; locking the data submitted the completed data to the National Center for Education Statistics (NCES).

Many states or systems had one or more IPEDS coordinators who were responsible for a specified group of institutions to ensure that all data were entered correctly. Some coordinators were responsible for a system of institutions (e.g., SUNY—the State University of New York); others coordinated all or some institutions in a state or jurisdiction. Coordinators may elect to provide different levels of review. For example, some may have only viewed data provided by their institutions, while others may have uploaded data from state or jurisdiction databases, reviewed the data, and/or locked data for their institutions.

In early August 2016, NCES sent letters to chief executive officers (CEOs) at institutions without preexisting keyholders, requesting that they appoint a keyholder for the 2016–17 collection year. The package included a letter for the keyholder and a registration certificate with the institution's UserID for the entire 2016–17 collection year, along with the temporary password enabling the keyholder to register and establish a permanent password. Additionally, in early August, NCES sent e-mail messages to keyholders and coordinators who were continuing in their respective roles, providing them with their UserID and a temporary password and requesting that they update or confirm their registration information beginning August 10, 2016. As with previous IPEDS data collection cycles, the 2016–17 cycle required some follow-up for nonresponse. These activities began August 31, 2016, in an effort to prompt remaining keyholders to register. NCES staff sent a follow-up letter to CEOs of institutions whose keyholder had not registered, and also called institutions to prompt registration. The result of these efforts was the eventual registration of a keyholder or locking coordinator at all

institutions. Additional follow-ups with CEOs, coordinators, and keyholders for survey nonresponse were conducted via mail, e-mail, and telephone throughout the collection period. At the beginning of the winter and spring collections (in early December), NCES sent registered keyholders and coordinators e-mail messages alerting them to the collection opening and requesting that they update or confirm their registration contact information, if needed.

The web-based survey instruments offered many features to improve the quality and timeliness of the data. As indicated above, the IPEDS data collection system required survey respondents to register before entering 2016–17 data to provide a point of contact between NCES/IPEDS and the institution.

Online data entry forms were tailored to each institution based on characteristics such as institutional control (public, nonprofit, for-profit), level of institution (4-year, 2-year, and less-than-2-year), type of awards offered (degree-granting versus non-degree-granting), and calendar system (standard academic terms versus enrollment by program).

When available, the customized form contained preloaded data from previous years for easy reference and comparison purposes. Once the 2016–17 data were entered, either manually or through file upload, the keyholders ran edit checks and had to resolve all errors before they were able to lock (submit) their data. Once locked, the data were considered submitted, regardless of whether or not a coordinator had reviewed the submission.

Once the completed data had all locks applied, IPEDS help desk staff conducted a final review. The help desk staff contacted the institution's keyholder or its coordinator to resolve any remaining questions if they detected any additional problems. When all problems were resolved, they migrated the final data to the IPEDS Data Center, where the data became available to other responding institutions for comparison purposes.

## **Edit Procedures**

The web-based survey instrument contained edit checks to detect major reporting errors. The system automatically generated percentages and totals for each collection component and compared current responses to data reported the previous year. As edit checks ran, they prompted survey respondents to correct any errors detected by the system. If accurate data failed the edit checks, the survey respondents either confirmed the response or had to explain why the data appeared to be out of the expected data range. All edit checks had to be resolved (confirmed or explained) before each survey was permitted to be locked. In some cases, the respondents could not confirm or explain the edit failures, in which case they contacted the IPEDS help desk for edit overrides. The survey instrument also contained one or more context boxes on each survey component that respondents could, at their discretion, use to explain any special circumstances that might not be evident in their reported data. In addition, IPEDS help desk staff manually reviewed the data for additional errors. When necessary, the help desk staff contacted keyholders to verify the accuracy of the data.

For the *Institutional Characteristics* component of the collection, edits examined the types of educational offerings (occupational, academic, continuing professional, avocational, adult basic, or secondary) and whether the institution qualified as offering postsecondary programs and thus should be considered in scope for IPEDS. For all levels of offering and levels of award, edits

compared admission requirements, application fees, tuition and fees, and room and board charges with the prior year's data for consistency. The system flagged large changes in the student charges section for follow-up; for example, the percentage increase or decrease of current year versus prior year data was not expected to exceed 50 percent for application fees, 30 percent for tuition and fees, and 40 percent for room and board charges.

For the *Completions* component of the collection, the data collection system preloaded previously reported CIP codes using the 2010 edition of the CIP (CIP:2010). IPEDS required institutions to report *Completions* data using CIP:2010. The system checked the award levels reported for each CIP code against a predetermined list (of valid award levels for each 6-digit CIP code) developed by subject matter experts, and against prior year reporting. It also checked the award levels against those indicated on the prior year's *Institutional Characteristics* component and the prior year's *Completions* component. For each award level, an edit compared the gender totals for each two-digit CIP with the information from the prior year. For large current year and prior year values, current year values were expected to be within 50 percent of prior year values. Small values, numbers less than 20 for both years, were not compared. Within each award level, an edit compared the number of awards for each race/ethnicity and gender combination with the corresponding value from the prior year. Finally, the total number of completers (students) earning an award was expected to be less than or equal to the total number of completions (awards) reported.

The *12-Month Enrollment* survey component also had several automated edit checks. The edits compared student counts, by level, with prior year counts to ensure consistency. They also checked instructional activity hours to ensure that hours were reported if the institution reported students at the same level. Total instructional activity was also compared with the unduplicated headcount, for each student level, to ensure that the reported activity was appropriate for the number of students reported. That is, the contact and credit hours reported were expected to fall within a specific range defined by the institution's calendar system and unduplicated headcount enrollment. The keyholder had to explain any discrepancies or data reported outside the expected ranges.

For the *Student Financial Aid* component of the survey, the number of full-time, first-time students had to be less than or equal to the total number of undergraduate students enrolled. The number of full-time, first-time students who received any financial aid during the full academic year had to be less than or equal to the number of full-time, first-time undergraduate students, and the total aid received by the full-time, first-time students had to be less than the total aid received by all undergraduates. For public institutions, the sum of in-district, in-state, and out-of-state full-time, first-time undergraduate students could not exceed the number of full-time, first-time undergraduate students as reported in Part B. The number of full-time, first-time undergraduate students receiving federal grants could not exceed the number of full-time, first-time undergraduate students who received any financial aid during the full academic year. The same criteria applied to state/local grants, institutional grants, and loans to students. In Part D, the average amount of aid received by full-time, first-time students was compared with the average amount of aid from the previous year, and the keyholder had to justify large discrepancies (typically 15 percent or greater) in the edit explanations. In Part E, average aid received in each income category was compared with that for the next lower income category,

and the keyholder had to justify (via edit explanations) instances where higher average aid was received by students with higher incomes.

For the *Graduation Rates* component, the initial cohort of full-time, first-time degree- or certificate-seeking students was preloaded using data collected in the *Fall Enrollment* component for the applicable cohort year in order to ensure consistent reporting. Revisions to the initial cohort were permitted if better data had become available. To ensure that the sum of individual cells did not exceed the revised cohort for any race/ethnicity or gender classification, the system summed the individual cells and compared the result to the appropriate revised cohort values. The edits required institutions reporting very high or very low numbers of completers (as a percentage of the total cohort) to explain this anomaly. Finally, if any cohort members were reported for either section of the *Graduation Rates* component (bachelor's or equivalent degree-seeking or other-than-bachelor's or equivalent degree-seeking), then data had to be present in each applicable section.

For the *200 Percent Graduation Rates* component, the collection system contained preloaded data on the cohort of full-time, first-time degree- or certificate-seeking students; exclusions from the cohort; and completers within 150 percent of normal program completion time from the *Graduation Rates* component covering the appropriate cohort year. Edit checks compared the sums of individual cells with the revised cohort. Additionally, the edit rules required institutions reporting very high or very low numbers of completers within 151 to 200 percent of normal program completion time, or reporting high numbers of additional cohort exclusions (as a percentage of the cohort), to explain this anomaly and make necessary corrections.

The *Fall Enrollment* component had several automated edit checks designed to ensure internal consistency. Among them, the number of full-time, first-time degree/certificate-seeking undergraduate students had to be less than or equal to the total number of students. The checks compared student counts, by level, with activity hours reported in other components to ensure that the numbers of undergraduate and graduate students were reported in a way that was consistent with previously reported data. Total students from Part B had to equal the number reported in Part A. For this collection cycle, Part C data (reported by state or jurisdiction of residence) were optional. However, if reported, total first-time degree/certificate-seeking students in Part A (reported by race/ethnicity) had to equal total first-time degree/certificate-seeking students in Part C. If the system detected discrepancies in the numbers reported in parts A, B, and C, it generated balance amounts and entered data into "unknown" fields. For all sections, where large discrepancies (typically 25 percent or greater) existed between current year responses and data from previous years, the keyholder had to justify the discrepancy via edit explanations.

For the *Finance* component, if the system detected large changes when comparing current year data with the previous year's data, the keyholder had to justify the differences in the edit explanations. In the version of the *Finance* component for nonprofit institutions, total net assets had to equal total unrestricted net assets plus total restricted net assets. Total net assets also had to equal total assets minus total liabilities. For all versions of the *Finance* component, the collection system generated selected fields using predetermined formulas—such as other sources of revenue, other expenses, and long-term debt outstanding at the end of the fiscal year. Institutions were instructed to review the generated totals and resolve any data entry errors.

For the *Human Resources* component of the survey, edit checks compared current-year data for the full-time and part-time staff sections with the previous year's data, and the keyholder had to explain any large discrepancies. Within the full-time staff section, Part A, the total number of full-time instructional staff had to be greater than or equal to the number of newly hired full-time permanent instructional staff (by gender and race/ethnicity). In addition, the total number of other full-time staff had to be greater than or equal to the number of newly hired full-time staff in the corresponding occupational category (by gender and race/ethnicity). Within Part G, the sum of the full-time instructional staff reported across the contract lengths had to be less than or equal to the corresponding total number of full-time instructional staff reported in Part A for each of the academic ranks, by gender. For each occupational category, monthly weighted average salaries were calculated, and the system performed checks to detect unusually high or unusually low averages. Total part-time staff reported in Part D were checked for consistency with the total part-time staff reported in Part E, by occupational category.

For the *Academic Libraries* component of the survey, edit checks ensured that a value was entered for all fields in Section I: Library Collections/Circulation and Interlibrary Loan Services. In Section II, Expenses, edit checks ensured that a value was entered for all applicable fields. If the institution indicated that fringe benefits were paid out of the library budget, a value greater than zero was required to be entered for Total Fringe Benefits. In addition, if the institution indicated that fringe benefits were not paid out of the library's budget, a value of zero was required to be entered for Total Fringe Benefits.

For the *Admissions* component of the survey, edit checks were performed to ensure that there was a response to each item on the Admissions Consideration page and that "Required" was selected for at least one of the considerations. On the Applicants/Admissions/Enrollment page, edit checks were performed to ensure that the total for each field was greater than zero and also greater than or equal to the sum of the values separately reported for men and women. The total number of admissions was expected to be less than a percentage of the number of applicants; the percentage used in this edit varied by institutional sector. In addition, the number of admissions was required to be greater than or equal to the total number of students who enrolled. On the Test Score page (which was applicable only when SAT or ACT scores were required for admission), the edit checks ensured that the total number of test scores (both SAT and ACT scores) submitted by enrolled students was greater than or equal to the total number of enrolled students. In addition, the edit checks ensured that data were entered for each of the fields on the page. Edit checks ensured that test scores were within the range of valid scores for each test and test component. Additionally, if 25th percentile scores were reported, a 75th percentile score was required to be reported for that test score component, and vice versa. Edit checks also ensured that the 75th percentile scores were reported as being greater than the corresponding 25th percentile scores.

For the *Outcome Measures* component, the initial cohorts of full-time, first-time and part-time, and first-time degree/certificate-seeking students were preloaded using data collected in the *Fall Enrollment* component for the applicable cohort year in order to ensure consistent reporting. Revisions to the initial cohorts were permitted if better data had become available. The edits required institutions reporting very large changes in the revised cohorts to explain the anomalies. To ensure that the sum of individual cells did not exceed the revised cohort for any group, the system summed the individual cells and compared the result to the appropriate revised cohort

values. Additionally, cross-component comparisons with the appropriate *Graduation Rates* and *200 Percent Graduation Rates* components were conducted to ensure consistency between *Outcome Measures* data and prior reported data on full-time, first-time students from the applicable cohort year.

## Imputation Procedures

All components of the 2016–17 IPEDS collection were subject to imputation for nonresponse—both institutional (unit) nonresponse and item nonresponse—should any exist within the component. With the exception of the *Institutional Characteristics* component, all items collected in each component were eligible for imputation. Within the *Institutional Characteristics* component, only cost of attendance and other institutional charges data were eligible for imputation.

Only institutions with the following characteristics were candidates for imputation or to serve as donors:

- The institution must participate in Title IV student financial aid programs.
- The institution must be currently active<sup>11</sup> in IPEDS.
- The institution must not be a child institution (a child institution’s data are reported by another institution, referred to as the “parent”).

In addition to these general criteria, the following conditions also needed to be satisfied by institutions in the indicated component in order for the institution to be considered as an imputee or donor. Note that three components (*Institutional Characteristics*, *Human Resources*, and *Finance*) do not require that any additional criteria be satisfied.

- For the *Completions* and *12-Month Enrollment* components, the institution must not be an administrative office, and the institution must not be new to the IPEDS universe.
- For the *Student Financial Aid* component, the institution must not be an administrative office, and the institution must have enrolled undergraduate students in 2014–15.
- For the *Fall Enrollment* component, the institution must not be an administrative office.
- For the *Graduation Rates* and *200 Percent Graduation Rates* components, the institution must not be an administrative office, and the institution must have enrolled full-time, first-time students for the appropriate cohort year.
- For the *Admissions* component, the institution must not have an open admissions policy.
- For the *Academic Libraries* component, the institution must be degree-granting, and the institution must have a library expenditure greater than zero.
- For the *Outcome Measures* component, the institution must be degree-granting and have enrolled undergraduate students during the 2008–09 academic year.

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<sup>11</sup> Prior to imputation, institutions that did not respond were verified as currently active (open for business) through telephone calls or e-mail.

IPEDS applies a single imputation method for both unit and item nonresponse. The Nearest Neighbor procedure identifies data related to the key statistics of interest for each component (the distance measure), then uses those data to identify a responding institution similar to the nonresponding institution and uses the respondent's data as a substitute for the nonrespondent's missing items. Depending upon the component and the relationships between the distance measure and the key statistics of interest, an adjustment to account for dissimilarity between the imputee and donor may be applied. Information on response rates and any imputations conducted for each component is included in the provisional version of the *First Look* report containing those data.