# 2011-12 Integrated Postsecondary Education Data System (IPEDS) Methodology Report



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**JULY 2012** 

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# **Foreword**

This report describes the universe, methods, and editing procedures used in the 2011-12 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 enrolled, number of employees, financial statistics, graduation rates, and student financial aid. Institutions submit these data during three reporting periods corresponding to fall 2011, winter 2011-12, and spring 2012. Information provided in this report is applicable to the full 2011-12 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 <a href="http://www.nces.ed.gov/ipeds">http://www.nces.ed.gov/ipeds</a>.

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The U.S. Department of Education, National Center for Education Statistics, 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 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

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. 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.

IPEDS provides basic statistics on postsecondary institutions regarding tuition and fees, number and types of degrees and certificates conferred, number of students enrolled, number of employees, financial statistics, graduation rates, and student financial aid. The Higher Education Amendments of 1992 make 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. As a result of this mandate, IPEDS response rates are nearly 100 percent, and the resulting database is used as the principal sampling frame for other postsecondary surveys.

The IPEDS survey is separated into nine components, which correspond to three seasonal reporting periods. In the fall, data for the Institutional Characteristics, Completions, and 12-Month Enrollment survey components are collected. The winter collection consists of the Human Resources and Student Financial Aid components, and the spring collection consists of the Enrollment, Finance, Graduation Rates, and 200% Graduation Rates components.

The 2011-12 IPEDS survey was a web-based data collection. Totals, averages, and percentages were automatically calculated by the data collection system. As respondents entered data, the responses were compared with the 2010-11 submission for the same institution to ensure the data were reasonable. The data were also compared with related values reported during 2011-12 to ensure consistency of reporting within each survey component and across the data collection program. In the event that missing data existed following the edit checks, or if institutional (unit) nonresponse was present for a survey component, imputations were conducted to ensure a complete database was available for analysis.

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<sup>&</sup>lt;sup>1</sup> The other U.S. jurisdictions surveyed in IPEDS are American Samoa, the Federated States of Micronesia, Guam, the Marshall Islands, the Commonwealth of the Northern Mariana Islands, Palau, Puerto Rico, and the U.S. Virgin Islands.

# **Survey Methodology**

# **Universe and Institutions Surveyed**

The IPEDS universe is established during the fall collection period. For 2011-12, a total of 7,479 Title IV<sup>2</sup> postsecondary entities (7,398 institutions and 81 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 Office of Postsecondary Education, and information provided by the institutions themselves. Although they are not Title IV eligible, four of the U.S. service academies are included in the IPEDS universe as if they were Title IV institutions 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 2011-12 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.

Thirty-two postsecondary institutions and one administrative office included in prior IPEDS data collections were determined to be outside the scope of IPEDS in 2011-12 because they were closed, merged with another institution, or no longer offered postsecondary programs. Additionally, 312 postsecondary institutions were reported exclusively by a parent institution and are not included in the universe counts; on the other hand, 323 postsecondary institutions and one administrative office were added to the universe through the PEPS review. Changes to the IPEDS universe between 2010-11 and 2011-12 are described in table 2, which displays the count of Title IV institutions, those changing Title IV status from 2010-11 to 2011-12, and the percentage change, disaggregated by level and control of institution.

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)). However, the IPEDS database also includes institutions that do not participate in Title IV financial aid programs. These institutions are invited to participate in the IPEDS program, and if they voluntarily respond to the surveys, the institutions are included in the College Navigator (<a href="http://nces.ed.gov/collegenavigator">http://nces.ed.gov/collegenavigator</a>). The College Navigator is designed to help college students, prospective students, and their parents learn about admission

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

requirements, degrees offered, costs, graduation rates, and other characteristics of institutions that they may find helpful in selecting among postsecondary institutions.

Because Title IV institutions and administrative offices are the primary focus of IPEDS and are required to report IPEDs data, component response rates for Title IV entities are typically greater than 99 percent.

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 2011-12

	Number of institutions			Percent of institutions				
	Private					Private		
Level of institution and region	Total	Public	Nonprofit	For-profit	Total	Public	Nonprofit	For-profit
Total institutions	7,398	2,039	1,890	3,469	100.0	100.0	100.0	100.0
Total U.S. institutions	7,234	2,011	1,830	3,393	97.8	98.6	96.8	97.8
Level of institution								
4-year	3,053	700	1,611	742	41.3	34.3	85.2	21.4
U.S.	2,983	683	1,566	734	40.3	33.5	82.9	21.2
Other U.S. jurisdictions	70	17	45	8	0.9	8.0	2.4	0.2
2-year	2,332	1,082	189	1,061	31.5	53.1	10.0	30.6
U.S.	2,305	1,072	185	1,048	31.1	52.6	9.8	30.2
Other U.S. jurisdictions	27	10	4	13	0.4	0.5	0.2	0.4
Less-than-2-year	2,013	257	90	1,666	27.2	12.6	4.8	48.0
U.S.	1,946	256	79	1,611	26.3	12.6	4.2	46.4
Other U.S. jurisdictions	67	1	11	55	0.9	#	0.6	1.6
Region								
New England	436	110	168	158	5.9	5.4	8.9	4.6
Mid East	1,148	280	427	441	15.5	13.7	22.6	12.7
Great Lakes	1,134	286	306	542	15.3	14.0	16.2	15.6
Plains	652	201	194	257	8.8	9.9	10.3	7.4
Southeast	1,779	555	375	849	24.0	27.2	19.8	24.5
Southwest	766	238	95	433	10.4	11.7	5.0	12.5
Rocky Mountains	290	79	30	181	3.9	3.9	1.6	5.2
Far West	1,024	257	235	532	13.8	12.6	12.4	15.3
U.S. service academies	5	5	0	0	0.1	0.2	0.0	0.0
Other U.S. jurisdictions	164	28	60	76	2.2	1.4	3.2	2.2

<sup>#</sup> Rounds to zero

NOTE: Title IV institutions are those with a written agreement with the Secretary of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs. 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 five U.S. service academies are the U.S. Naval Academy, the U.S. Military Academy, the U.S. Coast Guard Academy, the U.S. Air Force Academy, and the U.S. Merchant Marine Academy. The other U.S. jurisdictions include American Samoa, the Federated States of Micronesia, Guam, the Marshall Islands, the Commonwealth of the Northern Mariana Islands, Palau, Puerto Rico, and the U.S. Virgin Islands. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2011, Institutional Characteristics component.

Table 2. Number of Title IV institutions, number changing Title IV status, and percentage change, by control and level of institution: United States and other U.S. jurisdictions, academic years 2010-11 and 2011-12

	Title IV institutions in 2010-11		Title IV institution	Percentage change in	
Control and level of institution	cł Number	Number changing Title IV status in Number 2011-12		Number changing Title IV status since Number 2010-11	
All in a tituetiana	7.470	400	7.000	200	0.4
All institutions	7,178	108	7,398	328	3.1
Public	2,043	16	2,039	11	-0.2
Private nonprofit	1,869	26	1,890	32	1.1
Private for-profit	3,266	66	3,469	285	6.2
4-year	2,951	23	3,053	94	3.5
Public	696	1	700	0	0.6
Private nonprofit	1,598	16	1,611	22	8.0
Private for-profit	657	6	742	72	12.9
2-year	2,301	29	2,332	66	1.3
Public	1,093	10	1,082	4	-1.0
Private nonprofit	178	8	189	4	6.2
Private for-profit	1,030	11	1,061	58	3.0
Less-than-2-year	1,926	56	2,013	168	4.5
Public	254	5	257	7	1.2
Private nonprofit	93	2	90	6	-3.2
Private for-profit	1,579	49	1,666	155	5.5

NOTE: Title IV institutions are those with a written agreement with the Secretary of Education that allows the institution to participate in any of the Title IV federal student financial assistance programs. In addition to institutions changing Title IV status, the number of Title IV institutions in 2010-11 may also differ from the number of Title IV institutions in 2011-12 due to changes in level or control of individual institutions from year to year. The other U.S. jurisdictions include American Samoa, the Federated States of Micronesia, Guam, the Marshall Islands, the Commonwealth of the Northern Mariana Islands, Palau, Puerto Rico, and the U.S. Virgin Islands.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2010 and Fall 2011 Institutional Characteristics components.

### **Survey Components**

#### **Institutional Characteristics**

This component of the IPEDS survey collected basic data on each institution, such as institution name, location, educational offerings, control or affiliation, admission requirements, estimated fall enrollment, and student services. Data were also collected on student charges for academic year 2011-12 for each level of enrollment (undergraduate and graduate) or for the institution's six largest programs (if programs are primarily occupational/vocational). Finally, price of attendance for full-time, first-time degree- or certificate-seeking (undergraduate) students was requested, which includes tuition and fees, books and supplies, room and board, and other expenses (such as transportation, laundry, and entertainment). Price data are those used by the institutions' financial aid offices to determine student aid. Student charges data for undergraduates, which are the average for all full-time students, may differ from institutional pricing data, which include published tuition and fees for full-time, first-time degree/certificate-seeking students.

### Completions

Data on the number of degrees or other formal awards conferred between July 1, 2010, and June 30, 2011, were collected in this component. The counts of awards conferred were collected by award level, race/ethnicity, gender, and 6-digit Classification of Instructional Program (CIP) code. Completions data on the number of awards conferred with multiple majors were collected by 6-digit CIP code, degree level, race/ethnicity, and gender from institutions that confer degrees or certificates with multiple majors. Summaries by award level, race/ethnicity, and gender based on the first two digits of the CIP code were generated by the data collection system. CIP code information is based on the 2010 version of the CIP codes.

#### 12-Month Enrollment

Unduplicated headcount enrollment and instructional activity data for the 12-month reporting period July 1, 2010, through June 30, 2011, were collected via this component. Unduplicated student counts were collected by race/ethnicity, gender, and level of student for those students enrolled during the reporting period. Students who attended at different levels within the 12-month period were reported at the highest level at which the student was enrolled. Data on instructional activity for the reported students were collected, and the full-time equivalent (FTE) undergraduate student enrollment and FTE graduate student enrollment were calculated.

#### **Human Resources**

The Human Resources (HR) component of IPEDS collected data on the number of staff on the institution's payroll as of November 1, 2011, utilizing three distinct but related sections of the component to collect the data: Employees by Assigned Position, Salaries, and Fall Staff.

### Employees by Assigned Position (EAP) Section

The EAP section categorized all staff by employment status (full or part time), faculty status, and primary function/occupational activity. The medical school portion of EAP was applicable to institutions with Doctor of Medicine (M.D.) and/or Doctor of Osteopathic Medicine (D.O.) programs only. Employees affiliated with (housed in or under the authority of) the medical school were reported with the medical school. Employees who were in health disciplines that were not housed in the medical school were reported in the non-medical-school portion of the EAP section.

The main functions/occupational activities of the EAP section were primarily instruction, instruction combined with research and/or public service, primarily research, primarily public service, executive/administrative/managerial, other professional (support/service), graduate assistants, technical and paraprofessionals, clerical and secretarial, skilled crafts, and service/maintenance. If, by institutional definition, a staff member had faculty status, the staff member was categorized according to tenure status: with tenure, on tenure track, not on tenure track, or no tenure system. If a staff member did not have faculty status, he or she was counted in the "without faculty status" category.

#### Salaries Section

This section of the HR component collected data on full-time instructional staff—that is, those persons classified as either primarily instruction or instruction combined with research and/or public service (except those reported in the medical schools part of the EAP section, as described above). The Salaries section was required for Title IV degree-granting institutions except for those institutions at which all instructional staff were part time, contribute their services (are not paid by the institution, e.g., members of a religious order), are in the military, or teach preclinical or clinical medicine.

This section collected the number of full-time instructional staff on less-than-9-month, 9/10-month, and 11/12-month contracts by gender and academic rank (professor, associate professor, assistant professor, instructor, lecturer, or no academic rank). Also, 4-year degree-granting institutions reported the number of full-time instructional staff on 9/10-month and 11/12-month contracts by faculty status, gender, and academic rank. In addition, the Salaries section collected the salary outlays associated with full-time instructional staff on 9/10-month and 11/12-month contracts by gender and academic rank.

### Fall Staff Section

This section of the HR component was required in 2011-12 but is optional when the data correspond to a reporting period of an even-numbered year (e.g., 2010). The amount of detail reported via the Fall Staff section for degree-granting institutions was determined by the number of full-time staff at the institution or administrative office. A standalone Fall Staff section was not required of degree-granting institutions with fewer than 15 full-time employees or any non-degree-granting institutions. Instead, for those institutions, the race/ethnicity and gender details described below were collected via a combined EAP/Fall Staff instrument.

Degree-granting institutions and related administrative offices with 15 or more full-time staff completed the long version of Fall Staff. This version collected the number of staff by employment status (full time and part time), gender, race/ethnicity, faculty status, academic rank, and primary function/occupational activity. This version also collected data on newly hired full-time permanent staff. In particular, in 2011-12 the long version collected the following:

- faculty and tenure status of full-time staff whose primary responsibility was instruction, research, and/or public service, by race/ethnicity, gender, and academic rank;
- all other full-time staff by race/ethnicity, gender, primary function/occupational activity;
- part-time staff (including graduate assistants) by race/ethnicity, gender, and primary function/ occupational activity; and
- full-time new hires (hired between July 1, 2011, and October 31, 2011) by race/ethnicity, gender, and primary function/occupational activity.

While most of the primary functions/occupational activities in the Fall Staff section were the same as the primary functions/occupational activities in the EAP section, the aggregate category of "instruction/research/public service" staff from the Fall Staff section did not have a single, direct counterpart in the EAP section. The set of individuals reported in this portion of the Fall Staff section was equivalent to the group of people reported in the EAP section as primarily

instruction, instruction combined with research and/or public service, primarily research, and primarily public service.

#### Student Financial Aid

This 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 2010-11 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 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).

Data were collected based on the 2010-11 academic year for those institutions that were part of the IPEDS universe and indicated that they enrolled undergraduate students in 2010-11. Student counts were collected based on fall 2010 enrollment or unduplicated counts for 2010-11, 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. In Part B, student counts and aid totals were collected for overall grant aid, Pell grant aid, and federal student loans. Part C collected student counts and aid totals for Pell grant, 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 Part D, student counts by residency (on campus, off campus, and off campus with family) were collected, 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. For parts D and E, public institutions were asked to report only on students paying in-state tuition and fees. Private institutions were ask 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, respectively, and allowed institutions to provide comments for contextualizing the net prices.

#### **Enrollment**

This component had six separate parts. Parts A, B, C, and D data were reported as of the institution's official fall reporting date (or October 15, 2011). Part A collected summary data on the number of students enrolled in the fall, including the number of first-time degree/certificate-seeking undergraduate students; the total number of degree/certificate-seeking undergraduates; total undergraduates; and total graduate students—all by race/ethnicity, gender, and enrollment status (full or part time). Part B (which was required this year but is optional when data correspond to the fall of an even-numbered year) collected summary data on the number of students enrolled in the fall in each student level (undergraduate and graduate) by age category, gender, and enrollment status. Part C (which was optional this year, but is required when data correspond to the fall of an even-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. 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. A worksheet was provided to assist the institution in calculating the ratio requested.

#### **Finance**

Summary data on each institution's financial status in fiscal year 2011 were collected via this component. Different versions of the Finance component were available based mainly on control of the institution: public, private nonprofit, and private for-profit. Public institutions were allowed to choose 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>5</sup>

For public institutions that used GASB reporting standards to prepare their financial statements, data were collected 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), component units that report using FASB standards (Part F), component units that report using GASB standards (Part G), and endowment assets (Part H). Additionally, certain data were collected for the U.S. Bureau of the Census, including revenue data (Part J), expenditure data (Part K), and debts and assets (Part L).

Nonprofit institutions and public institutions that used 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), student grants (Part C), revenues and investment return (Part D), expenses by functional and natural classification (Part E), and endowment assets (Part H). A shortened version of the nonprofit form was developed for for-profit institutions, and data were collected on balance sheet information (Part A), summary of changes in equity (Part B), student grants (Part C), revenues and investment return (Part D), and expenses by function (Part E).

#### **Graduation Rates**

This 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 this cohort completing within 150 percent of normal time to program completion; and the number who transferred to other institutions. This component was developed

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<sup>&</sup>lt;sup>5</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>&</sup>lt;sup>6</sup> Component units are separate entities for which the institution is financially accountable.

<sup>&</sup>lt;sup>7</sup> Part I has been discontinued and is no longer applicable.

to help institutions comply with requirements of the Student Right-to-Know legislation. In 2011-12, for 4-year institutions, the cohort consisted of those students who first started in the 2005-06 academic year, and for 2-year and less-than-2-year institutions, the cohort was those students starting in the 2008-09 academic year. Institutions operating on standard academic terms (semester, trimester, quarter) reported on a fall cohort; all other institutions reported on a full 12-month cohort (September 1 through August 31).

#### 200% Graduation Rates

This component collected the number of students entering the institution as full-time, first-time degree/certificate-seeking students in a particular year (cohort); the number of students in this cohort completing within 100, 150, and 200 percent of normal program completion time; and the number of cohort exclusions. In 2011-12, for 4-year institutions, the cohort consisted of those students who first started in the 2003-04 academic year, and for 2-year and less-than-2-year institutions, the cohort was those students starting in the 2007-08 academic year. For 4-year institutions, the information collected was limited to bachelor's degree-seeking students only, while less-than-4-year institutions reported on the entire cohort. Institutions operating on standard academic terms (semester, trimester, quarter) reported on a fall cohort; all other institutions reported on a full 12-month cohort (September 1 through August 31).

## **Survey Procedures**

The 2011-12 IPEDS survey was a web-based data collection. Each institution appointed a keyholder who was responsible for ensuring that survey data submitted by the institution 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 were also required to edit and "lock" the data; locking the data submits the completed data to 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, and/or locked data for their institutions.

In early August, letters were sent to chief executive officers (CEOs) at institutions without preexisting keyholders requesting that they appoint a keyholder for the 2011-12 collection year. The package included a letter for the keyholder and a registration certificate with the institution's UserID and password for the entire 2011-12 collection year. Additionally, in early August, email messages were sent to keyholders and coordinators who were continuing in their respective roles, providing them with their new UserID and password and requesting that they update or confirm their registration information beginning August 3, 2011. As with previous IPEDS data collection cycles, follow-ups for nonresponse were conducted. These activities began August 24, 2011, in an effort to prompt remaining keyholders to register. Follow-up letters were sent to CEOs of institutions whose keyholder had not registered, resulting in the registration of a keyholder or locking coordinator at all institutions. Additional follow-ups for survey

nonresponse were conducted via mail, e-mail, and telephone throughout the collection period with CEOs, coordinators, and keyholders. At the beginning of the winter and spring collections (in early December and early March), e-mail messages were sent to registered keyholders and coordinators requesting that they update or confirm their registration contact information when the collections opened.

The web-based survey instruments offered many features to improve the quality and timeliness of the data. As indicated above, survey respondents were required to register before entering 2011-12 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), and calendar system (standard academic terms vs. enrollment by program).

When data from previous years were available for an institution, they were preloaded on the customized forms for easy reference and comparison purposes. Once the 2011-12 data were entered, either manually or through file upload, the keyholders were required to run edit checks and resolve all errors before they were able to lock (submit) their data. Once data were locked, they were considered submitted, regardless of whether or not a coordinator had reviewed the submission.

Once the data were complete and all locks were applied, IPEDS help desk staff conducted a final review. If any additional problems were detected, the help desk staff contacted the institutions or their coordinator to resolve any remaining questions. When all problems were resolved, the final data were migrated to the IPEDS Data Center, where they were available to other responding institutions for comparison purposes.

#### **Edit Procedures**

Edit checks were built into the web-based instrument 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 were executed, survey respondents were allowed to correct any errors detected by the system. If data were entered correctly but failed the edit checks, the survey respondents were asked either to confirm the data were entered correctly or 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 were required to contact the IPEDS help desk for edit overrides. Survey respondents were also provided with one or more context boxes on each survey component and were encouraged to use this area to explain any special circumstances that might not be evident in their reported data. In addition, the data were manually reviewed for additional errors by the IPEDS help desk staff. When necessary, keyholders were contacted to verify the accuracy of the data.

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

award, admission requirements, application fees, tuition and fees, and room and board charges were compared with the prior year's data for consistency. Large changes in the student charges section were flagged 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, CIP codes previously reported were preloaded using the 2010 edition of the CIP (CIP:2010). All institutions were required to use CIP:2010 for reporting Completions data. Award levels reported for each CIP code were checked against a predetermined list (of valid award levels for each 6-digit CIP code) developed by subject matter experts. Award levels were also checked against those indicated on the prior year's Institutional Characteristics component. CIP codes and award levels were compared with the prior year's data for consistency. For each award level, the gender totals for each two-digit CIP were compared with the information from the prior year. For large current year and prior year values, the absolute relative percent difference of current year values versus prior year values was not expected to be more than 50 percent. Small values, numbers less than 20 for both years, were not subjected to comparisons. Also, the number of awards for each race/ethnicity and gender combination, within each award level, was compared with the corresponding value from the prior year. Finally, the total number of awards was expected to be less than the total enrollment reported on the fall 2010 Enrollment component by level of enrollment (undergraduate and graduate) and by gender. Data that failed any of these checks triggered a required confirmation or explanation.

The 12-Month Enrollment survey also had several automated edit checks. Student counts, by level, were compared with prior year counts to ensure consistency. Instructional activity hours were checked to ensure that hours were reported if students were reported at these levels. 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 in a specific range defined by the institution's calendar system and unduplicated headcount enrollment. Any discrepancies or data reported outside the expected ranges had to be explained.

For the Human Resources component of the survey, current year data for the EAP and Salaries sections were compared with the previous year's data and large discrepancies had to be explained.

Within the Salaries section, average salaries were calculated, and checks were in place to detect unusually high or unusually low averages. The number of full-time instructional staff in the Salaries section had to be equal to the number of full-time non-medical-school staff reported as either primarily instruction or instruction combined with research and/or public service in the EAP section and less than or equal to the number of full-time instruction/ research/public service staff in the Fall Staff section.

Within the Fall Staff section, the total number of full-time staff whose primary responsibility was instruction, research, and/or public service had to be greater than or equal to the number of newly hired full-time permanent staff whose primary responsibility was instruction, research, and/or public service (by gender and race/ethnicity). In addition, the total number of all other full-time

staff had to be greater than or equal to the number of newly hired full-time staff in a corresponding primary function/occupational activity (by gender and race/ethnicity).

When comparing across sections, the total number of staff reported in the Fall Staff section was required to match the total number of staff reported in the EAP section. More specifically, the total number of staff by employment status (full time plus part time) and primary function/occupational activity for the EAP and Fall Staff sections were required to match. Totals from the EAP section were carried forward to the Fall Staff section for comparison and to ensure the consistency of data being reported. Staff classified as primarily instruction, primarily research, primarily public service, and/or instruction combined with research and/or public service in the EAP section had to be reported in the Fall Staff section by race/ethnicity and gender in the single category "staff whose primary responsibility is instruction, research, and/or public service"; otherwise, a fatal error occurred. The number of full-time instructional staff in the Salaries section had to be equal to the number of full-time non-medical-school staff reported as either primarily instruction or instruction combined with research and/or public service in the EAP section and had to be less than or equal to the number of full-time instruction/research/public service staff in the Fall Staff section.

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 first-time, full-time students had to be less than the total aid received by the total undergraduates. For public institutions that charged by residency, 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 first-time, full-time students was compared with the previous year, and large discrepancies (typically 15 percent or greater) had to be justified by the keyholder in the edit explanations. In Part E, average aid received in each income category was compared with the next lower income category, and instances where higher average aid was received by students with higher incomes had to be justified by the keyholder in the edit explanations.

The 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. Student counts, by level, were compared with activity hours reported in earlier components to ensure that the numbers of undergraduate and graduate students were reported in a way that was consistent with previously reported data. For this collection cycle, Part C data (reported by state or jurisdiction of residence, U.S. territory, or foreign country) were optional. However, if reported, total students from Part C had to equal the number reported in Part A. In addition, 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 B (reported by age). If the system detected discrepancies in the numbers reported in parts A, B, and C, balance amounts were generated and

entered into "unknown" fields. Additionally, current year data for all sections were compared with data from previous years, and large discrepancies (typically 25 percent or greater) had to be justified by the keyholder in the edit explanations.

For the Finance component, current year data were compared with the previous year's data and large changes from one year to the next had to be justified 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, selected fields—such as other sources of revenue, other expenses, and long-term debt outstanding at the end of the fiscal year—were generated by the collection system using predetermined formulas. Institutions were instructed to review the generated totals and resolve any data entry errors.

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 Enrollment survey for the applicable cohort year in order to ensure consistent reporting. Revisions to the initial cohort were permitted if better data had become available, and such revisions were to be explained in the context boxes. Individual cells were summed to ensure that they did not exceed the revised cohort for any race/ethnicity or gender classification. Institutions reporting very high or very low numbers of completers (as a percentage of the total cohort) were required to explain this anomaly. Finally, if cohort members were reported for either section of the Graduation Rates component (bachelor's-seeking or other-than-bachelor's-seeking), data had to be reported in each applicable section.

For the 200% Graduation Rates component, 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 were preloaded from the Graduation Rates component covering the appropriate cohort year. Individual cells were summed to ensure that they did not exceed the revised cohort. 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), were required to explain this anomaly and make necessary corrections.

## **Imputation Procedures**

All components of the 2011-12 IPEDS collection were subject for 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 price of attendance and other institutional charges data were eligible for imputation.

Only institutions with the following characteristics were considered as 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>8</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 below conditions also needed to be satisfied by institutions in the indicated component in order to be considered as an imputee or donor.

For the Completions and 12-Month Enrollment components:

- The institution must not be an administrative office.
- The institution must not be new to the IPEDS universe.

For the Human Resources component, Salaries section:

- The institution must not be an administrative office.
- The institution must be degree-granting.
- The institution's instructional staff must not all fall into one of the following categories:
  - instructional staff who are employed on a part-time basis;
  - instructional staff who contribute their services;
  - instructional staff who are military personnel; or
  - instructional staff who teach preclinical or clinical medicine.

For the Student Financial Aid component:

- The institution must not be an administrative office.
- The institutions must have enrolled undergraduate students in 2010-11.

For the Enrollment component:

• The institution must not be an administrative office.

For the Graduation Rates and 200% Graduation Rates components:

- The institution must not be an administrative office.
- The institution must have enrolled full-time, first-time students for the appropriate cohort year.

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 utilizes 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

<sup>&</sup>lt;sup>8</sup> Prior to imputation, institutions that did not respond were verified as currently active (open for business) through telephone calls or e-mail.

imputee and donor may be applied. Information on response rates are included for each component in both the preliminary and provisional versions of the *First Look*, while any imputations conducted for each component are included only in the provisional *First Look* report containing those data.