

# COMPLETE TO COMPETE

## Common College Completion Metrics



## TECHNICAL GUIDE

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## Common College Completion Metrics Technical Guide

NGA Center for Best Practices

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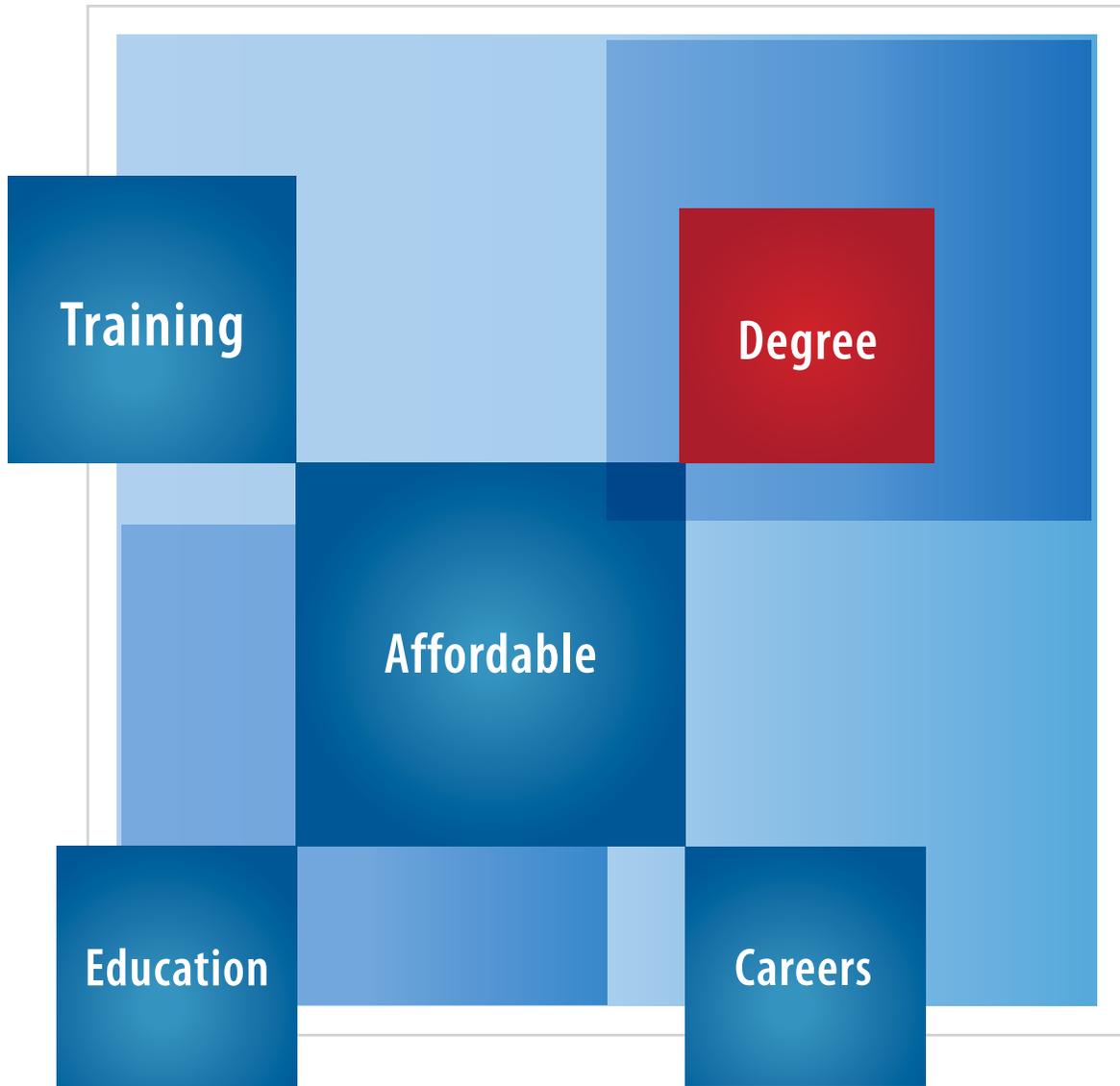
*The Common College Completion Metrics Technical Guide* was prepared by Ryan Reyna, senior policy analyst, and Travis Reindl, program director, in the Education Division of the NGA Center for Best Practices; Keith Witham, former senior research analyst, Complete College America; and, Jeff Stanley, associate vice president, State Higher Education Executive Officers. Patrick Kelly, senior associate at the National Center for Higher Education Management Systems, and Jennifer Engle, assistant director of higher education at the Education Trust, provided valuable feedback. The individuals involved in this project are grateful to the wide array of state policymakers who also provided input.

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# INTRODUCTION

Improved college completion rates are critical to the future of the United States, and states must have better data to understand the nature of the challenges they confront or target areas for policy change. The 2010-2011 National Governors Association (NGA) Chair's initiative, *Complete to Compete*, recommends that all states collect data from all public, postsecondary institutions to report on a set of common measures of college completion that can be used to monitor system performance and inform future policy decisions. Recommendations pertaining to common college completion metrics were presented in *Complete to Compete: Common College Completion Metrics*.

The purpose of this accompanying technical guide is to increase consistency and commonality across states in reporting benchmark data and measuring future progress in improving college completion and efficiency in higher education. The concepts, data elements, and definitions supporting the college completion metrics recommended in *Complete to Compete* are summarized in Appendix A.

## Background

The recommendations in *Complete to Compete: Common College Completion Metrics* emerged from two convenings in 2009 and 2010. One was a July 27-28, 2009, Data/Metrics Convening in Denver, Colorado, that was hosted by Complete College America, the National Center for Higher Education Management Systems (NCHEMS), and the State Higher Education Executive Officers (SHEEO). Participants at this event are listed in Appendix B. The second was the NGA Work Group on Common College Completion Metrics, a group of state and national experts convened by NGA on May 13, 2010, to refine the recommended core set of metrics. Participants in the NGA Work Group on Common College Completion Metrics are listed in Appendix C.

As a basis for the collective work, individuals at both events strongly endorsed the following statement of purpose for the common college completion metrics. The recommended college completion metrics are intended to do the following:

- **Inform**—help policymakers and the general public understand how students (particularly historically underserved, low-income, and minority young adults), institutions of higher education, and states are doing on college completion;
- **Analyze**—help policymakers and institutions of higher education identify specific challenges and opportunities for improvement;
- **Show progress**—establish a fair baseline and show progress over time; and
- **Hold accountable**—hold students, institutions of higher education, and states accountable to the general public and policymakers investing taxpayer dollars in higher education.

Moreover, individuals at the 2009 event identified the following set of guiding principles to contextualize, prioritize, and guide the implementation of the metrics (see box on this page).

### GUIDING PRINCIPLES

1. The data on which the metrics are based must be collected uniformly, allowing for comparisons across states and, whenever possible, across institutions of higher education.
2. The metrics should be capable of being disaggregated by subpopulations (by age, race, gender, income) and by the value or type of degree or credential, in order to continuously assess the equity of postsecondary opportunity.
3. The initial set of metrics should be capable of being constructed from readily available data. While data systems should improve over time, the urgent need to improve college completion necessitates utilizing currently available data to measure progress.
4. The quantity of metrics implemented should be carefully balanced to reflect a focus on data that connect most clearly to completion rates.
5. The metrics should help to identify barriers to student achievement and provide guidance as to actions that might be taken to improve student success. This means that progression (intermediate) as well as outcome (completion) metrics should be included. It also means that metrics should be disaggregated by and allow for comparison among institutions of higher education.
6. Priority should be placed on measuring improvement over time.
7. The metrics should be transparent and publicly reported.
8. The metrics should be constructed in a manner that minimizes the potential for unintended negative consequences.

## Categories of Common College Completion Metrics

The *Complete to Compete: Common College Completion Metrics* identified three categories of college completion metrics:

- **Outcome metrics.** Outcome metrics quantify the end-product of the educational process—mainly the completion of an academic program, and additionally for community colleges, the successful transfer of students to a baccalaureate campus—informing policymakers and the public how students, institutions, and the state are performing in terms of increased postsecondary attainment.
- **Progress metrics.** Progress metrics measure student progress from semester-to-semester or year-to-year toward the completion of an academic program. Such metrics allow institutions of higher education the ability to track student progression in a way that allows for early intervention and support to increase the likelihood of a successful completion or transfer outcome.
- **Context metrics.** Context metrics tell the broader story of how a state is doing on college completion. These metrics allow state policymakers to understand both college completion outcomes relative to growth in enrollment and the overall effectiveness of their higher education system in increasing educational attainment of the state’s citizens.

Significantly increasing college completion will require closing the gaps in success rates for low-income and minority students, as well as ensuring the success of targeted subgroups such as adults, transfer students, part-time students, and students who required remedial education. The metrics should also facilitate measuring progress on a state’s specific postsecondary goals, such as increasing the number of graduates in science, technology, engineering, and mathematics (STEM) or health fields. To understand and track improvement, outcome and progress metrics must be disaggregated by race/ethnicity, gender, income (Pell Grant recipients), age group, student attendance status, transfer versus native-to-the-institution students, degree type, and discipline. States may also wish to flag within their data systems those students who graduated from high schools within the state (“in-state” students).

For all of these metrics, the standard rule of nondisclosure of personally identifiable information applies. States and institutions should not publicly report disaggregated data that pertain to a sample size (N) of 10 or fewer students. (See definitions of data elements and disaggregation categories in Appendix A for more information on the disaggregation specified throughout this guide).

States with unit record systems may use their system- or state-level data to construct the metrics for reporting purposes. States without complete, or any, unit record systems may collect these data by requesting them from the colleges and universities in a way that allows for aggregation at the state level and used in constructing the metrics. These states should begin the process of adding the additional data elements to their unit record systems as soon as possible. All states are encouraged to supplement their data through the National Student Clearinghouse to provide more accuracy with respect to transfer students within the state.

# OUTCOME METRICS

## Outcome Metric 1: Degrees and Certificates Awarded

<i>Purpose:</i>	To determine how many undergraduate degrees and certificates the state's system of postsecondary education and its public colleges and universities are awarding annually, and to measure change over time.
<i>Definition:</i>	Annual number of certificates of one year or greater in length <sup>1</sup> , associate degrees, and bachelor's degrees awarded; disaggregated by age group, gender, race/ethnicity, Pell status (at any time), remedial status (at any time), transfer/first-time students, and discipline.

### Notes on Collection and Reporting:

For data collection in 2010, the recommended baseline year is Academic Year 2007-08, followed by annual reporting in each subsequent year.

Degree production should be reported for the state and for each public institution of higher education within the state as appropriate. Each type of award should be reported and displayed individually, as well as in a cumulative total.

Data should be unduplicated at the institution or state level to show only the highest degree earned by a student in a given year. This metric is not a calculation of cohort survival rate.

## Outcome Metric 2: Graduation Rates

<i>Purpose:</i>	To determine the rate at which students graduate from a public institution of higher education.
<i>Definition:</i>	Number and percentage of entering undergraduate students who graduate from a degree or certificate program within 100 percent, 150 percent, and 200 percent of program time. Disaggregated by degree/credential type, race/ethnicity, gender, age group, Pell status (at time of entry), and remedial status (at time of entry).
	<b>Associate Degrees:</b>
	First-time, <u>full-time</u> associate degree-seeking students
	Numerator: Number of students in cohort (denominator) who earn an award in two years for 100 percent time, in three years for 150 percent time, and in four years for 200 percent time (each timeframe should be reported separately).
	Denominator: Number of first-time associate degree-seeking students entering in the fall semester of the given year, whose attendance status at entry is full-time.
	First-time, <u>part-time</u> associate degree-seeking students
	Numerator: Number of students in cohort (denominator) who earn an award in two years for 100 percent time, in three years for 150 percent time, and in four years for 200 percent time (each timeframe should be reported separately).
	Denominator: Number of first-time associate degree-seeking students entering in the fall semester of a given year whose attendance status at entry is part-time.
	<u>Transfer at entry</u> associate degree-seeking students
	Numerator: Number of students in cohort (denominator) who earn an award in two years for 100 percent time, in three years for 150 percent time, and in four years for 200 percent time (each timeframe should be reported separately).

<sup>1</sup> The criterion of one year or greater pertains to the difficulty in establishing a consistent definition of quality or content for very short-term certificates. Although states may wish to collect and report information on certificates of less than one year in length that are awarded in the state, they should attempt to assess the value those certificates have in helping them reach their overall educational attainment and workforce development goals.

*Definition:*

Denominator: Number of associate degree-seeking students entering in the fall semester of a given year who enter with or without some college credits after attending another institution of higher education (excludes students entering with only Advanced Placement or dual enrollment credits).

**Bachelor's Degree:**

First-time, full-time bachelor's degree-seeking students

Numerator: Number of students in cohort (denominator) who earn an award in four years for 100 percent time, in six years for 150 percent time, and in eight years for 200 percent time (each timeframe should be reported separately).

Denominator: Number of first-time bachelor's degree-seeking students entering in the fall semester of a given year whose attendance status at entry is full-time.

First-time, part-time bachelor's degree-seeking students

Numerator: Number of students in cohort (denominator) who earn an award in four years for 100 percent time, in six years for 150 percent time, and in eight years for 200 percent time (each timeframe should be reported separately).

Denominator: Number of first-time bachelor's degree-seeking students entering in the fall semester of a given year whose attendance status at entry is part-time.

Transfer at entry bachelor's degree-seeking students

Numerator: Number of students in cohort (denominator) who earn an award in four years for 100 percent time, in six years for 150 percent time, and in eight years for 200 percent time (each timeframe should be reported separately).

Denominator: Number of bachelor's degree-seeking students entering in the fall semester of a given year who enter with or without credits after attending another institution of higher education (excludes students entering with only Advanced Placement or dual enrollment credits).

**Certificates (of at least one year in program length):**

First-time, full-time certificate-seeking students

Numerator: Number of students in cohort (denominator) who earn an award in 100 percent, 150 percent, and 200 percent of the expected (full-time) program length (each timeframe should be reported separately).

Denominator: Number of first-time, full-time certificate-seeking students entering in the fall semester of a given year.

First-time, part-time certificate-seeking students

Numerator: Number of students in cohort (denominator) who earn an award in 100 percent, 150 percent, and 200 percent of the expected (full-time) program length (each timeframe should be reported separately).

Denominator: Number of first-time, part-time certificate-seeking students entering in the fall semester of a given year.

### Notes on Collection and Reporting:

For data collection in 2010, recommended years to use for baseline are as follows:

- *Associate Degree-Seeking Cohort—Baseline*
  - a. First-time, full-time cohort identified in fall semester 2004; 100 percent time by August 31, 2006; 150 percent time by August 31, 2007; and 200 percent time by August 31, 2008.
  - b. First-time, part-time cohort identified in the fall semester 2004; 100 percent time by August 31, 2006; 150 percent time by August 31, 2007; and 200 percent time by August 31, 2008.
  - c. Transfer at entry cohort identified in fall semester 2004; 100 percent time by August 31, 2006; 150 percent time by August 31, 2007; and 200 percent time by August 31, 2008.

For all three cohorts, the next entering cohort begins with entry in fall semester 2005.

- *Bachelor's Degree-Seeking Cohorts—Baseline*
  - a. First-time, full-time cohort identified in fall semester 2002; 100 percent time by August 31, 2006; 150 percent time by August 31, 2008; 200 percent time by August 31, 2010.
  - b. First-time, part-time cohort identified in the fall semester 2002; 100 percent time by August 31, 2006; 150 percent time by August 31, 2008; 200 percent time by August 31, 2010.
  - c. Transfer at entry cohort identified in the fall semester 2002; 100 percent time by August 31, 2006; 150 percent time by August 31, 2008; 200 percent time by August 31, 2010.

For all three cohorts, the next entering cohort begins with entry in fall semester 2003.

- *Certificate-Seeking Cohorts—Baseline*
  - a. Both the first-time, full-time cohort and the first-time, part-time cohort identified in the fall semester 2005; 100 percent time by August 31, 2007; 150 percent time by August 31, 2008; 200 percent time by August 31, 2010.

For both cohorts, the next entering cohort begins with entry in the fall semester 2006.

Graduation rates should be produced for the state and for each public institution of higher education within the state as appropriate. Institutions that award both associate and bachelor's degrees can report graduation rates for each cohort separately. For a public institution of higher education graduation rate, the award must have been completed at that specific institution to be counted in the numerator. For graduation rates at the state level, the award can be counted in the numerator regardless of where that student started and completed as long as it was an in-state institution (for states with longitudinal databases that allow for such tracking of students and/or states that use the National Student Clearinghouse).

Each timeframe (100 percent, 150 percent, and 200 percent) should be reported and displayed individually for each respective student type (first-time full-time, first-time part-time, and transfer at time of entry) for each type of award (Associate degree, Bachelor's degree, and Certificate). The timeframes (100 percent, 150 percent, and 200 percent) are defined by program length.

For the certificate-seeking cohort, the cohort includes students seeking a certificate that is at least one year but less than two years in program length and students seeking a certificate that is two years or greater in programs length. As such, the timeframes (100 percent, 150 percent, and 200 percent) are based on completion of a certificate that is two years or greater in program length.

Attendance status of student (full-time, part-time, transfer) is defined at time of entry. "Transfer at entry" is defined as a student who previously attended a postsecondary institution (with or without credit and who may or may not have a degree award). Undergraduate students entering the institution directly from high school who earned dual credit or Advanced Placement credit or any other type of college credit while enrolled in high school should not be considered a transfer student at entry.

Students identified as "transfer at entry" include both part-time and full-time students. Data should be unduplicated at the state level.

## Optional Methods to Supplement the Graduation Rate Metrics

1. **Attendance Status:** Many institutions serve large numbers of students whose attendance status may change over the course of their enrollment. For that reason, an additional graduation rate calculation (following the same calculation methodology and baseline cohort years) that includes all students regardless of full or part-time enrollment may be useful to supplement the above graduation rate metrics.
  
2. **12-Month Enrollment vs. Fall Semester Entry (Program vs. Academic Year):** Many colleges, especially community colleges, increasingly enroll students throughout the year or have nontraditional academic calendars. For that reason, states may wish to make a provision for institutions to adopt a 12-month enrollment method of identifying graduation rate cohorts. Institutions currently have this option for identifying their Graduation Rate Survey (GRS) cohorts for reporting the U.S. Department of Education’s Integrated Postsecondary Education System (IPEDS) (referred to as “program year” reporting as opposed to “academic year” reporting).

### Outcome Metric 3: Transfer Rates (for community colleges only)

<i>Purpose:</i>	To determine the proportion of students successfully transferring from two-year institutions of higher education to four-year institutions of higher education.
<i>Definition:</i>	Annual number and percentage of students who transfer from a two-year campus to a four-year campus by race/ethnicity, gender, age group, Pell status (at time of entry), and remedial status (at time of entry).
	Numerator:      Number of students from the cohort (denominator) who enroll at a four-year public institution of higher education.
	Denominator:    Number of entering students in two-year public institutions of higher education in the fall semester of a specified year.

Notes on Collection and Reporting:

For data collection in 2010, the recommended years to use for baseline are as follows:

- a. First-time, full-time cohort identified in fall semester 2004 and followed annually until August 31, 2008.
  
- b. First-time, part-time cohort identified in the fall semester 2004 and followed annually until August 31, 2008.
  
- c. Transfer at entry cohort identified in fall semester 2004 and followed annually until August 31, 2008.

For all three cohorts, the next entering cohort begins with entry in the fall semester 2005.

The transfer-out metric should be produced for the state and for each public two-year institution of higher education in the state. Many institutions do not have the ability to determine what type of institution (if any) students enroll in after transferring out of their institution. Therefore, in most states this metric will need to be supplied by systems or by the state for institutions using either a student-unit record system or the National Student Clearinghouse.

**Optional Disaggregation to Supplement the Transfer-Out Metric:** States/institutions may identify specific policy goals for which it would be necessary to disaggregate the transfer-out data by a threshold of credits or credentials earned prior to transfer (i.e., the percentage of students who transfer having earned fewer than 30 credits, more than 30 credits, after receiving an associate degree, etc.).

## Outcome Metric 4: Time and Credits to Degree

**Purpose:** To determine the average length of time in years and number of credits to complete a certificate or undergraduate degree by student entry status, race/ethnicity, gender, age groups, Pell status (at any time), remedial status (at any time), and discipline.

**Definition:** Time to degree. Average length of time in years a student takes to complete an associate degree, a bachelor's degree, or a certificate of one year or greater normal program time. Start with the degrees/certificates awarded in a specified year and determine how many total years and months elapsed from the first date of entry to the date of completion. Partial years should be expressed as a decimal. Average the number of years across students and report by degree type.

Credits to degree. Average number of credits a student has accumulated when they earn an associate degree, a bachelor's degree, or a certificate of one year or greater. Start with the degrees/certificates awarded in a specified year and determine the total number of credit hours each student completed since first enrolling. Average the number of credit hours across students and report by degree type.

### Notes on Collection and Reporting:

The baseline year is certificates and degrees awarded in Academic Year 2007-08 followed by annual reporting in each subsequent year.

The metric should be produced for the state and each public institution of higher education within the state. For calculating the metrics for each institution, only include elapsed time and accumulated credits that the student was enrolled in/completed at that specific institution. At the state level, include all time and credits.

Student status (full-time, part-time, transfer) is identified at time of entry to the public institution of higher education.

For this metric, student race/ethnicity should be based upon data reported at the time of completion (as opposed to at entry to conform to the new IPEDS race/ethnicity codes).

# PROGRESS METRICS

## Progress Metric 1: Enrollment in Remedial Education

<i>Purpose:</i>	To determine the proportion of undergraduate students who enroll in remedial coursework at public institutions of higher education.
<i>Definition:</i>	<p>Annual number and percentage of entering first-time undergraduate students who enroll in remedial math, English/reading, or both math and English/reading courses; by race/ethnicity, gender, age groups, Pell status (at time of entry).</p> <p><b>Remedial Math Only:</b></p> <p>Numerator: Number and percentage of students from the cohort (denominator) who enrolled in a remedial math course (but not a remedial English/reading course) during the first academic year.</p> <p>Denominator: All first-time degree or certificate-seeking students entering in the fall semester of the specified year.</p> <p><b>Remedial English/Reading Only:</b></p> <p>Numerator: Number and percentage of students from the cohort (denominator) who enrolled in a remedial English/reading course (but not a remedial math course) during the first academic year.</p> <p>Denominator: All first-time degree or certificate-seeking students entering in the fall semester of the specified year.</p> <p><b>Both Remedial Math and English:</b></p> <p>Numerator: Number and percentage of students from the cohort (denominator) who enrolled in a remedial English/reading and a remedial math course during the first academic year.</p> <p>Denominator: All first-time degree or certificate-seeking students entering in the fall semester of the specified year.</p>

## Progress Metric 2: Success in Remedial Education

<i>Purpose:</i>	To determine the proportion of undergraduate students who complete remedial education and go on to complete college-level coursework in the same subject within two academic years.
<i>Definition:</i>	<p>Annual number and percentage of entering first-time undergraduate students who complete remedial education courses in math, English/reading, or both and complete a college-level course in the same subject; by race/ethnicity, gender, age groups, Pell status (at time of entry).</p> <p><b>Remedial Math Only:</b></p> <p>Numerator: Number and percentage of remedial students (denominator) who complete all required courses in remedial math and the first college-level math course within two academic years.</p> <p>Denominator: All first-time degree or certificate-seeking students enrolled in remedial math course(s) during the first academic year.</p>

**Remedial English/Reading Only:**

Numerator: Number and percentage of remedial students (denominator) who complete all required courses in remedial English/reading and the first college-level English/reading course within two academic years.

Denominator: All first-time degree or certificate-seeking students enrolled in remedial English/reading course(s) during the first academic year.

**Both Remedial Math and English:**

Numerator: Number and percentage of remedial students (denominator) who complete all required courses in remedial English/reading and math and the first college-level English/reading and math courses within two academic years.

Denominator: All first-time degree or certificate-seeking students enrolled in both remedial English/reading and math course(s) during the first academic year.

**Notes on Collection and Reporting:**

For data collection in 2010, Progress Metric 1 and Progress Metric 2 use the same cohort. The recommended years to use for the baseline are as follows:

- For two-year institutions of higher education, the baseline is established with the first-time entry students in the fall semester 2006. These students are followed through August 31, 2008, to determine the numerator.

A new cohort is established in each subsequent year of the baseline (the next one is identified in the fall semester 2007) with the timeframe for completing the remedial course and the college-level courses) in the same subject area(s) being within two academic years.

- For four-year institutions of higher education, the baseline is established with the first-time entry students in the fall semester 2006. These students are followed through August 31, 2008, to determine the numerator.

A new cohort is established in each subsequent year of the baseline (the next one is identified in the fall semester 2007) with the timeframe for completing the remedial course and the college-level courses) in the same subject area(s) being within two academic years.

The metric should be produced for each public institution of higher education within the state, and aggregated at the state level for each sector (two-year institutions and four-year institutions).

Both full-time and part-time students should be included.

Data should be unduplicated at the state level.

**Disaggregation of Other Metrics by Remedial Status:** Remedial course-taking functions both as a metric in itself and as a disaggregation category (see definitions of data elements and disaggregation categories in Appendix A for more information). The remedial education metrics refer to enrollment in remedial courses during the period being reported on (i.e., 2007-08 academic year), while the remedial status disaggregation category refers to whether students took a least one remedial course at time of entry or at any time during their postsecondary enrollment depending upon the specific metric.

### Progress Metric 3: Success in First-Year College Courses

<i>Purpose:</i>	To determine the proportion of undergraduate students completing entry, college-level math and English courses within the first two academic years at public institutions of higher education.
<i>Definition:</i>	Annual number and percentage of entering first-time degree- or certificate-seeking undergraduate students who complete entry college-level math and English courses within the first two consecutive academic years; by race/ethnicity, gender, age groups, Pell status (at time of entry), and remedial status (at time of entry).
	<p>Numerator: Number of students from cohort (denominator) who complete at least one entry college-level (nonremedial or developmental course) math and at least one English course within the first two consecutive academic years.</p> <p>Denominator: Number of first-time degree- or certificate-seeking undergraduate students enrolling in the fall semester of a specified year.</p>

**Notes on Collection and Reporting:**

For data collection in 2010, the recommended years to use for baseline are as follows:

- For two-year institutions of higher education, the baseline is established with the first-time entry students in the fall semester 2006. These students are followed through August 31, 2008, to determine the numerator.

A new cohort is established in each subsequent year of the baseline (the next one is identified in the fall semester 2007), and the timeframe for completing the college-level course(s) in the same subject area(s) is within two academic years after entry into the institution.

- For four-year institutions of higher education, the baseline is established with the first-time entry students in the fall semester 2006. These students are followed through August 31, 2008, to determine the numerator.

A new cohort is established in each subsequent year of the baseline (the next one is identified in the fall semester 2008), and the timeframe for completing college-level course(s) in the same subject area(s) is within two academic years after entry into the institution.

The metric should be produced for each public institution of higher education within the state and at the state level.

Data for the metric should be collected in such a way that allows for isolation of looking at the number and percentage of (1) students completing an entry college-level course in math regardless of completing an entry college-level course in English; and (2) students completing an entry college-level course in English regardless of completing an entry college-level course in math.

Both full-time and part-time students should be included.

Data should be unduplicated at the state level.

## Progress Metric 4: Credit Accumulation

<i>Purpose:</i>	To determine the proportion of undergraduate students making steady academic progress during one academic year at public institutions of higher education.
<i>Definition:</i>	<p>Number and percentage of first-time degree- or certificate-seeking undergraduate students completing 24 credit hours (for full-time students) or 12 credit hours (for part-time students) within their first academic year by student entry status, race/ethnicity, gender, age groups, Pell status (at entry), and remedial status (at time of entry).</p> <p><b>Full-Time Students:</b></p> <p>Numerator: Number of students from cohort (denominator) completing 24 credit hours within one academic year after entry.</p> <p>Denominator: Number of first-time, full-time degree- or certificate-seeking undergraduate students entering in the fall semester of the specified year.</p> <p><b>Part-Time Students</b></p> <p>Numerator: Number of students from cohort (denominator) completing 12 credit hours within one academic year of entry.</p> <p>Denominator: Number of first-time, part-time degree- or certificate-seeking undergraduate students entering in the fall semester of the specified year.</p>

### Notes on Collection and Reporting:

The baseline is established with the first-time entering students in the fall semester 2006. A new cohort is established in each subsequent year of the baseline (the next one is identified in the fall semester 2007).

The metric should be produced for each public institution of higher education within the state and at the state level.

Student status (full-time, part-time) is identified at time of entry to the institution of higher education.

Data should be unduplicated at the state level.

## Progress Metric 5: Retention Rates

<i>Purpose:</i>	To determine the rate at which undergraduate students return to a public institution of higher education from fall to the following spring and from fall to the consecutive fall.
<i>Definition:</i>	<p>Number and percentage of entering degree- or certificate-seeking undergraduate students enrolling from fall to spring and from fall to fall at an institution of higher education by student entry status, race/ethnicity, gender, age groups, Pell status (at time of entry), and remedial status (at time of entry).</p> <p>Numerator: Number of students in cohort (denominator) enrolling in the next consecutive spring semester and the next consecutive fall semester.</p> <p>Denominator: Number of entering first-time degree- or certificate-seeking undergraduate students enrolling in the fall semester of a specified academic year.</p>

Notes on Collection and Reporting:

For data collection in 2010, the recommended years for baseline are as follows:

- **First-Time, Full-Time Students at Time of Entry:**

For two-year public institutions of higher education, the baseline is established with the first-time entering students in the fall semester 2004. These students are followed and reported on annually for four years.

For four-year public institutions of higher education, the baseline is established with the first-time entering students in the fall semester 2002. These students are followed for eight years.

A new cohort is established in each subsequent year of the baseline (the next cohort is identified in the fall semester 2005 for two-year institutions; and in the fall semester 2003 for four-year institutions).

- **First-Time, Part-Time Students at Time of Entry:**

For two-year public institutions of higher education, the baseline is established with the first-time entering students in the fall semester 2004. These students are followed and reported on annually for four years.

For four-year public institutions of higher education, the baseline is established with the first-time entering students in the fall semester 2002. These students are followed for eight years.

A new cohort is established in each subsequent year of the baseline (the next cohort is identified in the fall semester 2005 for two-year institutions; and in the fall semester 2003 for four-year institutions).

- **Transfer Students at Time of Entry:**

For two-year public institutions of higher education, the baseline is established with the entering transfer students in the fall semester 2004. These students are followed and reported on annually for four years.

For four-year public institutions of higher education, the baseline is established with the entering transfer students in the fall semester 2002. These students are followed for eight years.

A new cohort is established in each subsequent year of the baseline (the next cohort is identified in the fall semester 2005 for two-year institutions; and in the fall semester 2003 for four-year institutions).

The metric should be produced for the state and each public institution of higher education within the state. For a public institution of higher education retention rate, the student must be retained at that specific institution to be counted in the numerator. For retention rates at the state level, the student can be counted in the numerator regardless of where that student started (for states with longitudinal databases that allow for such tracking of students and/or states that use the National Student Clearinghouse).

For institutions using a quarterly academic calendar, the fall-to-spring semester retention rate should be operationalized as fall quarter to following spring quarter (skipping the winter quarter).

Student status (full-time, part-time, transfer) is identified at time of entry to the public institution of higher education.

Data should be unduplicated at state level.

## Progress Metric 6: Course Completion

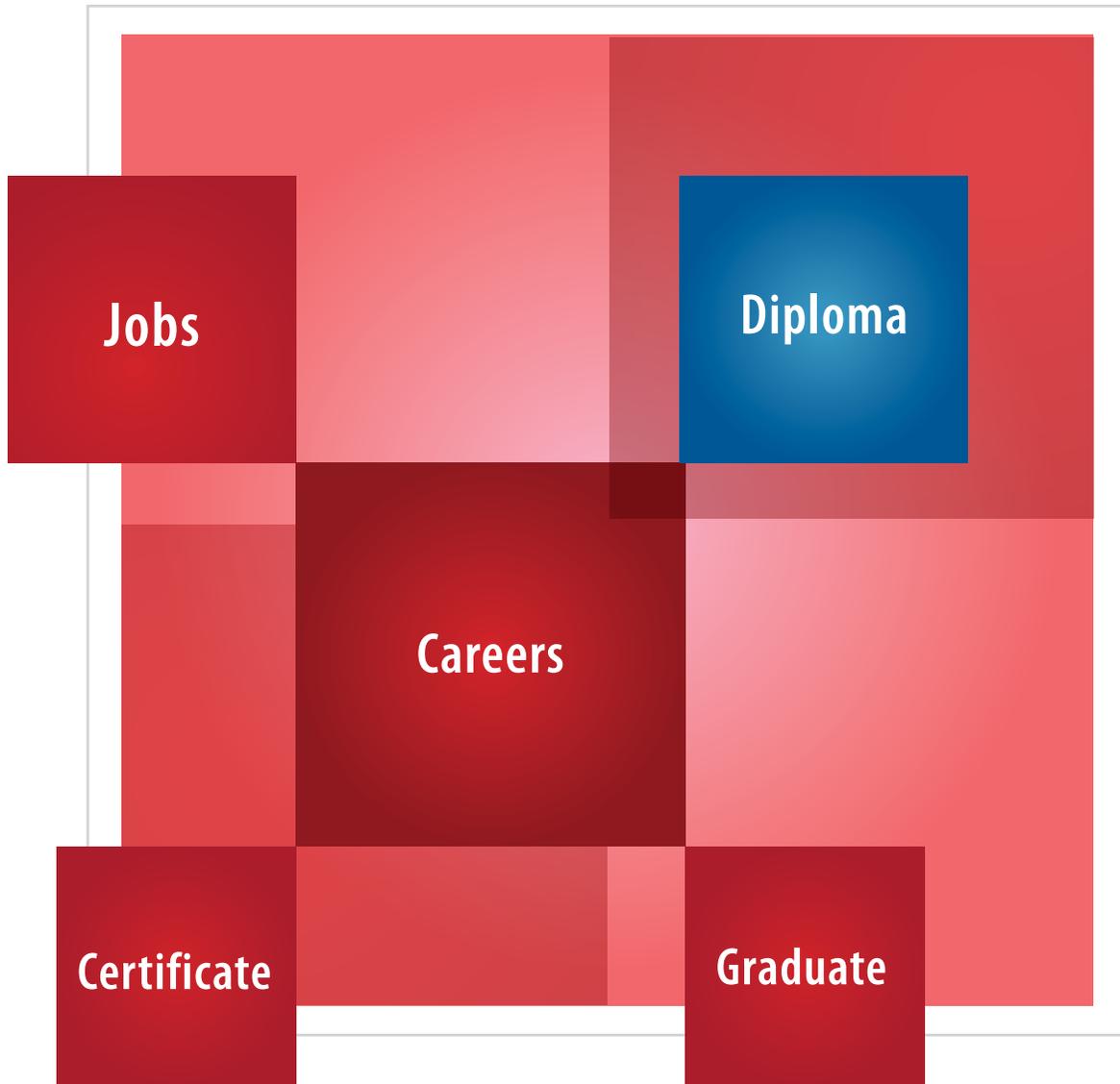
<i>Purpose:</i>	To determine the proportion of attempted credit hours completed by undergraduate students at public institutions of higher education.
<i>Definition:</i>	Percentage of credit hours completed out of those attempted by entering degree- or certificate-seeking undergraduate students, by semester and annually, by student entry status, race/ethnicity, gender, age groups, Pell status (at time of entry), and remedial status (at time of entry).  Numerator: Number of credit hours awarded to undergraduate students at the end of a specified semester or academic year.  Denominator: Number of credit hours degree- or certificate-seeking undergraduate students enrolled in during the same specified semester or academic year.

### Notes on Collection and Reporting:

The baseline year is students entering in the fall semester 2007 followed by annual reporting in each subsequent year.

The metric should be produced for the state and each public institution of higher education within the state.

Student status (full-time, part-time, transfer) is identified at time of entry to the institution of higher education.



## CONTEXT METRICS

Context metrics are aggregate state metrics calculated from annual degrees awarded and overall enrollment or state population data that can help to inform state policymakers of the overall effectiveness of a state's higher education system. Such measures are particularly important because they give policymakers a system-wide snapshot of higher education in the state.

### Context Metric 1: Enrollment

*Purpose:* To determine the number of students enrolling at public institutions of higher education and to measure changes in enrollment over time, overall, and for specific subgroups.

*Definition:* Annual unduplicated number of students enrolled over a 12-month period at public institutions of higher education, disaggregated by attendance status at entry (full-time or part-time), race/ethnicity, gender, age, and Pell recipient status at entry. Enrollment should be reported for each public institution, and aggregated by sector and by certificate-seeking, associate degree-seeking, bachelor's degree-seeking, and undetermined or courses-only.

#### Notes on Collection and Reporting:

The baseline year is Academic Year 2007-08 (for both the numerator and denominator) followed by annual reporting in each subsequent year.

The metric should be produced for the state and for each institution of higher education in the state.

### Context Metric 2: Completion Ratio

*Purpose:* To determine the proportion of certificates (of at least one year in expected length) and undergraduate degrees awarded relative to undergraduate student enrollment at public institutions of higher education.

*Definition:* Annual ratio of undergraduate degrees and certificates (of at least one year in expected length) awarded per 100 full-time equivalent (FTE) undergraduate students at the state level, disaggregated by race/ethnicity, gender, and degree type.

Numerator: Number of undergraduate degrees and certificates (of at least one year in program length) awarded in a specified year.

Denominator: Number of full-time equivalent (FTE) undergraduate students in the same year.

#### Notes on Collection and Reporting:

The baseline year is Academic Year 2007-08 (for both the numerator and denominator) followed by annual reporting in each subsequent year.

The metric should be produced for the state and for each institution of higher education in the state.

Full-time, part-time, and transfer students should be included.

At the state and institution level, the data should be collected in a manner that allows for the metric to be calculated and reported by specific race/ethnicity and gender by specific degree type (certificates, associate and bachelor's degrees).

This metric is not a calculation of cohort survival rate.

### Context Metric 3: Market Penetration

<i>Purpose:</i>	To determine the proportion of certificates (of at least one year in program length) and undergraduate degrees awarded at public institutions of higher education relative to the young adult age cohort for a state.
<i>Definition:</i>	Annual ratio of undergraduate degrees and certificates (of at least one year in program length) awarded relative to the state's population aged 18-24 years old with a high school diploma.  Numerator: Number of undergraduate degrees and certificates (of at least one year in program length) awarded in a specified year.  Denominator: Number of state's population aged 18-24 years old with a high school diploma.
<i>Years to Collect/Report:</i>	The baseline year is Academic Year 2007-08 (for both the numerator and denominator) followed by annual reporting in each subsequent year.

#### Notes on Collection and Reporting:

The baseline year is Academic Year 2007-08 (for both the numerator and denominator) followed by annual reporting in each subsequent year.

The metric should be produced at the state level.

Full-time, part-time, and transfer students should be included.

The data should be collected in a manner that allows for the metric to be calculated and reported by race/ethnicity, gender, and specific degree type (certificates, associate, and bachelor's degrees).

The source for the denominator should be data from the American Community Survey (ACS) as collected by the U.S. Census Bureau.

This metric is not a calculation of cohort survival rate.

# Appendix A:

## Definitions of Data Elements and Disaggregation Categories

Definitions of data elements and disaggregation categories used in this technical guide are presented in alphabetical order below. (Special note on disaggregation: For all metrics, the standard rule of nondisclosure of personally identifiable information applies. States and institutions should not publicly report disaggregated data that pertain to a sample size (N) of 10 or fewer students.)

### **Academic year**

An academic year includes a summer, fall, winter, and spring term but not necessarily in that order.

### **Age groups**

Date of birth as reported by student in the following age bands:

- Enroll directly from high school (or 18-19 if a state's K-12 and postsecondary data systems are not linked);
- Age 25 and older; and
- Other (not directly from high school or 25 and older).

### **Awards**

#### ***Associate degree***

An award (associate of arts or associate of science) that normally requires at least two but less than four years of full-time equivalent college work.

#### ***Bachelor's degree***

An award (baccalaureate or equivalent degree, as determined by the Secretary, U.S. Department of Education) that normally requires at least four but not more than five years of full-time equivalent college-level work. This includes all bachelor's degrees conferred in a five-year cooperative (work-study) program. A cooperative plan provides for alternate class attendance and employment in business, industry, or government; thus, it allows students to combine actual work experience with their college studies. Also includes bachelor's degrees in which the normal four years of work are completed in three years.

#### ***Certificate (at least one academic year in program length)***

An award that requires completion of an organized program of study at the postsecondary level (below the baccalaureate degree) in at least one full-time equivalent academic years, or designed for completion in at least 30 semester or trimester credit hours, or in at least 45 quarter credit hours, or in at least 900 contact or clock hours, by a student enrolled full time.

### **Credit**

#### ***Credit hour***

A unit of measure representing the equivalent of an hour (50 minutes) of instruction per week over the entire term. It is applied toward the total number of credit hours needed for completing the requirements of a degree, diploma, certificate, or other formal award.

#### ***Credit hour (attempted)***

The total number of student credit hours attempted in a specified academic term.

#### ***Credit hour (completed)***

The total number of credits earned in a specified academic term.

#### ***Degree/certificate-seeking students***

Students enrolled in courses for credit and recognized by the institution as seeking a degree, certificate, or other formal award. High school students enrolled in postsecondary courses for credit are not considered degree/certificate-seeking.

## **Discipline**

The following degree categories are based on the two-digit Classification of Instruction Programs (CIP) codes defined by the National Center for Education Statistics. When providing data by discipline, aggregate up to the subcategory and report by subcategory (i.e., Education, Arts & Humanities) as follows:

### ***Education***

13 Education

### ***Arts and Humanities***

5 Area, ethnic, cultural, and gender studies  
16 Foreign languages, literatures, and linguistics  
23 English language and literature/letters  
24 Liberal arts and sciences, general studies and humanities  
30 Multi/interdisciplinary studies  
38 Philosophy and religious studies  
39 Theology and religious vocations  
50 Visual and performing arts  
54 History

### ***Social and Behavioral Sciences and Human Services***

19 Family and consumer sciences/human sciences  
25 Library science  
31 Parks, recreation, leisure, and fitness studies  
42 Psychology  
44 Public administration and social service professions  
45 Social sciences

### ***Science, Technology, Engineering, and Math (STEM)***

1 Agriculture, agriculture operations, and related sciences  
3 Natural resources and conservation  
4 Architecture and related services  
11 Computer and information sciences and support services  
14 Engineering  
15 Engineering technologies/technicians  
26 Biological and biomedical sciences  
27 Mathematics and statistics  
29 Military technologies  
40 Physical sciences  
41 Science technologies/technicians

### ***Business and Communication***

9 Communication, journalism, and related programs  
10 Communications technologies/technicians and support services  
52 Business, management, marketing, and related support services

### ***Health***

51 Health professions and related clinical sciences

### ***Trades***

12 Personal and culinary services  
22 Legal professions and studies  
43 Security and protective services  
46 Construction trades  
47 Mechanic and repair technologies/technicians  
48 Precision production  
49 Transportation and materials moving

### **First-time student (undergraduate)**

A student who has no prior postsecondary experience (except as noted below) attending any institution for the first time at the undergraduate level. This includes students enrolled in academic or occupational programs. It also includes students enrolled in the fall term who attended college for the first time in the prior summer term, and students who entered with advanced standing (college credits earned before graduation from high school).

### **First-year college course (also referred to as college-level or gateway college course)**

The first credit-bearing college course in English or math that applies to course requirements for a certificate or degree.

### **Full-time equivalent student (FTE)**

The preferred FTE calculation is the U.S. Department of Education's Integrated Postsecondary Education System (IPEDS) definition based on instructional activity. The number of FTE students is calculated based on the credit and/or contact hours reported by the institution on the IPEDS 12-month enrollment (E12) component and the institution's calendar system, as reported on the Institutional Characteristics (IC) component. For institutions with continuous enrollment programs, FTE is determined by dividing the number of contact hours attempted by 900.

For institutions that do not have credit or contact hour information from which to generate the instructional-based FTE, the default FTE calculation should be as follows:

**Full-time annual  
unduplicated headcount**



**Part-time annual unduplicated headcount**  
**3**

### **Gender**

Sex (male or female or unknown) reported by the student.

### **Graduation rate**

This rate follows closely the rate required of institutions for disclosure and/or reporting purposes under Student Right-to-Know Act. This rate is calculated as the total number of completers within 100 percent, 150 percent, and 200 percent of normal time divided by the cohort.

### **Institution of higher education**

#### ***Two-year institution (also referred to as community college)***

A postsecondary institution that offers programs of at least two but less than four years' duration. Those institutions that historically have offered and awarded programs of at least two years, but recently have added programs of four years should be included as long as the majority of degrees awarded still are for programs of at least two years but less than four years duration. Includes occupational and vocational schools with programs of at least 1,800 hours and academic institutions with programs of less than four years. Does not include bachelor's degree-granting institutions where the baccalaureate program can be completed in three years.

#### ***Four-year institution***

A postsecondary institution that offers programs of at least four years duration or one that offers programs at or above the baccalaureate level. Does not include institutions that historically have offered and awarded programs of two years or less, but now offer programs of four years, if the majority of the degrees awarded still are for programs of at least two years but less than four years duration.

### **Pell recipient**

Undergraduate postsecondary student who qualifies and receives federal Pell Grant assistance through the Higher Education Act of 1965, Title IV, Part A, Subpart I, as amended.

#### ***Pell recipient at entry***

An undergraduate student is considered a Pell recipient at entry if the student received a Pell Grant within the first year of entry at a given institution of higher education.

***Pell recipient at any time***

An undergraduate student is considered a Pell recipient at any time if the student received a Pell Grant at any time during the student's undergraduate tenure.

***Race/ethnicity***

Categories used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The categories do not denote scientific definitions of anthropological origins. They are used to categorize U.S. citizens, resident aliens, and other eligible noncitizens.

**Note about race/ethnicity data codes:** For the graduation rate, retention, and other metrics that track a cohort of students, most states will use the old race/ethnicity codes to reflect what was reported at student's time of entry (i.e., 2002 or 2004 for the baseline years). For time and credits-to-degree, states should collect data using the new codes for students at their time of completion (i.e., 2007-08 for the baseline year). For all other measures, institutions should use the codes that align with the way other data for that year are being collected and reported for the IPEDS enrollment survey (i.e., states do not need to use the new codes until required to do so for IPEDS reporting).

***New race/ethnicity categories (1997 Office of Management and Budget)***

A new methodology was developed in 1997 by the Office of Management and Budget to be used in reporting race/ethnicity. Individuals are asked to first designate ethnicity as:

- Hispanic or Latino or
- Not Hispanic or Latino

Second, individuals are asked to indicate one or more races that apply among the following:

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White

***Hispanic or Latino (new definition)***

A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

***American Indian or Alaska Native (new definition)***

A person having origins in any of the original peoples of North and South America (including Central America) who maintains cultural identification through tribal affiliation or community attachment.

***Asian (new definition)***

A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian Subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

***Black or African American (new definition)***

A person having origins in any of the black racial groups of Africa.

***Native Hawaiian or Other Pacific Islander (new definition)***

A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

***White (new definition)***

A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

### **Remedial courses**

Instructional courses (also called developmental education) designed for students deficient in the general competencies necessary for a regular postsecondary curriculum and educational setting.

### **Remedial status (at time of entry)**

Remedial status at time of entry as a disaggregation category is determined by whether the student enrolled in a remedial course within the first year of entry at a given institution of higher education

### **Remedial status (at any time)**

Remedial status at any time as a disaggregation category is determined by whether a student enrolled in a remedial course in any subject at any time during their enrollment in postsecondary institutions.

### **Retention rate**

#### ***Fall-to-spring retention rate***

A measure of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelors (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the consecutive spring semester (or, for institutions on a quarter-based academic calendar, the following spring quarter). For all other institutions this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the following spring term.

#### ***Fall-to-fall retention rate***

A measure of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelors (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the current fall. For all other institutions this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall.

### **Student status**

#### ***Full-time student***

Undergraduate—A student enrolled for 12 or more semester credits, or 12 or more quarter credits, or 24 or more contact hours a week each term.

#### ***Part-time student***

Undergraduate—A student enrolled for either less than 12 semester or quarter credits, or less than 24 contact hours a week each term.

#### ***Transfer at entry***

A student entering the reporting institution for the first time but known to have previously attended a postsecondary institution. The student may transfer in with or without credit and/or a degree award.

### **Undergraduate**

A student enrolled in a four- or five-year bachelor's degree program, an associate degree program, a vocational or technical program, or a certificate program below the baccalaureate.

## Appendix B: Participants at the CCA/NCHEMS/SHEEO Data/Metrics Convening

The following list identifies participants at the Data/Metrics Convening of July 27-28, 2009, in Denver, Colorado. The convening was hosted by Complete College America, the National Center for Higher Education Management Systems (NCHEMS), and the State Higher Education Executive Officers (SHEEO) to discuss a common core set of metrics in the area of college completion.

### **Brenda Albright**

Franklin Education Group

### **Jim Applegate**

Lumina Foundation for Education

### **Sally Askman**

The M Company, Inc.

### **Chris Baldwin**

Jobs for the Future

### **Brian Bosworth**

Futureworks

### **J.B. Buxton**

Education Innovations Group, LLC

### **Tony Carnevale**

Center on Education and the Workforce  
Georgetown University

### **Kristin Conklin**

HCM Strategists, LLC

### **Greg Darnieder**

U.S. Department of Education

### **Gordon Davies**

Former State Higher Education Executive Officer, Kentucky and Virginia

### **Tom Dawson**

Bill & Melinda Gates Foundation

### **Jennifer Engle**

Education Trust

### **Matt Gianneschi**

Governor's Office of Policy & Initiatives  
State of Colorado

### **Barbara Gombach**

Carnegie Corporation of New York

### **Jan Ignash**

Washington Higher Education Coordinating Board

### **Davis Jenkins**

Community College Research Center, Teachers College, Columbia University

### **Dennis Jones**

National Center for Higher Education Management Systems

### **Stan Jones**

Complete College America

### **Richard Kazis**

Jobs for the Future

### **Patrick Kelly**

National Center for Higher Education Management Systems

### **David Longanecker**

Western Interstate Commission for Higher Education

### **Charles McGrew**

Data Quality Campaign

### **Thomas Mortenson**

Postsecondary Education OPPORTUNITY

### **Jeannie Oakes**

Ford Foundation

### **Cheryl Orr**

Complete College America

### **Raymund Paredes**

Texas Higher Education Coordinating Board

### **Hilary Pennington**

Bill & Melinda Gates Foundation

### **Richard Petrick**

Ohio Board of Regents

### **David Prince**

Washington State Board for Community & Technical Colleges

### **Richard Reeves**

National Student Clearinghouse

### **Jan Somerville**

National Association of System Heads

### **Jeff Stanley**

State Higher Education Executive Officers

### **Tom Sugar**

Complete College America

### **Jane Wellman**

Delta Cost Project

### **Keith Witham**

Complete College America

### **Josh Wyner**

Complete College America

**Tom Weko** (attending by conference call)

National Center for Education Statistics

## Appendix C: Members of the NGA Common College Completion Metrics Work Group

The National Governors Association (NGA) Common College Completion Metrics Work Group was convened on May 13, 2010, in Washington, D.C., to discuss and refine a set of common metrics pertaining to college completion—one component of the 2010-11 NGA Chair’s initiative, *Complete to Compete*. Participants in the NGA Common College Completion Metrics Work Group are listed below.

**Rob Anderson**

West Virginia Higher Education Policy Commission

**Mike Baumgartner**

Illinois Board of Higher Education

**Patrick Crane**

Office of the Governor  
State of West Virginia

**Kristin Conklin**

HCM Strategists

**Kevin Dougherty**

Teachers College  
Columbia University

**Jennifer Engle**

Education Trust

**Charles “Chip” Hatcher**

Economic Consultant

**Stan Jones**

Complete College America

**Patrick Kelly**

National Center for Higher Education Management  
Systems

**Jorge Klor de Alva**

Nexus Research and Policy Center

**Rich Petrick**

Ohio Board of Regents

**Jeff Stanley**

State Higher Education Executive Officers

**Adrea Turner**

Office of the Governor  
State of Maryland

**Keith Witham**

Complete College America



## NGA CENTER DIVISIONS

The NGA Center is organized into five divisions with some collaborative projects across all divisions.

- **Economic, Human Services & Workforce** focuses on best practices, policy options, and service delivery improvements across a range of current and emerging issues, including economic development and innovation, workforce development, employment services, research and development policies, and human services for children, youth, low-income families, and people with disabilities.
- **Education** provides information on best practices in early childhood, elementary, secondary, and postsecondary education. Specific issues include common core state standards and assessments; teacher effectiveness; high school redesign; science, technology, engineering and math (STEM) education; postsecondary education attainment, productivity, and accountability; extra learning opportunities; and school readiness.
- **Environment, Energy & Transportation** identifies best practices and provides technical assistance on issues including clean energy for the electricity and transportation sectors, energy and infrastructure financing, green economic development, transportation and land use planning, and clean up and stewardship of nuclear weapons sites.
- **Health** covers a broad range of health financing, service delivery, and coverage issues, including state options under federal health reform, quality initiatives, cost-containment policies, health information technology, state public health initiatives, and Medicaid.
- **Homeland Security & Public Safety** supports governors' homeland security and criminal justice policy advisors. This work includes supporting the Governors Homeland Security Advisors Council (GHSAC) and providing technical assistance to a network of governors' criminal justice policy advisors. Issues include emergency preparedness, interoperability, cyber-crime and cyber-security, intelligence coordination, emergency management, sentencing and corrections, forensics, and justice information technology.



John Thomasian, Director  
NGA Center for Best Practices  
444 N. Capitol Street, Suite 267  
Washington, DC 20001  
202.624.5300  
[www.nga.org/center](http://www.nga.org/center)

