# Measures of Student Success | Full Metrics

Since 2010, the Aspen Institute College Excellence Program (Aspen) has, through the Aspen Prize, measured how effectively community colleges deliver high, improving, and equitable student outcomes. In this process, Aspen assesses student outcomes during college: Do students complete their credentials? Are they learning valuable skills along the way?

While these are important questions, completing a credential is not the end of a community college's responsibility for its students' success. The overwhelming majority of students enter community college with the intention of improving their economic standing, either through completing a credential that prepares them to work or by transferring into (and completing) a bachelor's degree program. For this reason, Aspen also assesses two indicators that, together, represent the ultimate measures of community college success: 1) whether students transfer to four-year institutions and complete a bachelor's degree within six years of community college entry and 2) whether graduates earn a living wage after completing their community college credentials.

If a college is not achieving these outcomes for its students, then it has room for improvement. To guide colleges in their continuous improvement efforts, Aspen has developed a list of high-impact metrics across five broad categories: workforce outcomes, transfer/bachelor's completion outcomes, completion outcomes, teaching and learning outcomes, and access to the college and its high-value programs.

This list is not meant to reflect a *complete* set of metrics colleges should use. The metrics are also not meant to be adopted wholesale—college leaders will want to choose a limited number of metrics on which to focus their reform efforts. Finally, this list of metrics is not the only resource college leaders should consider. Users may also find value in other metric frameworks, including those used by Achieving the Dream, AACC's Voluntary Framework of Accountability, the Institute for Higher Education Policy's metrics framework, and the Postsecondary Data Partnership (PDP).

## NOTE ON DATA DISAGGREGATION

While college leaders will find value in collecting data on all students, consistently disaggregating data whenever possible can reveal outcome disparities. This information is essential for colleges developing strong reform plans to improve and close disparities in student success.

1) Race/ethnicity
2) Gender
3) Family/Personal Income
4) Age
5) Parent/Dependent status
6) Attendance intensity
7) First-generation status
8) Veteran status

Students may identify with one or many of the above identities. College leaders should consider how these different identities intersect and pay close attention to these relationships and how they may influence each student's experience.

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## WORKFORCE: MEASURES OF STUDENT SUCCESS

**High-value program enrollment**

- **Denominator:** 12-month unduplicated headcount
- **Measured:** Annually
- **Definition:** The number and percentage of students enrolled in programs classified as "high value," including certain workforce and pre-major associate degree programs. High value is determined by the average expected wages after completing a specific workforce program or the likelihood of success in attaining a bachelor's degree after completing a liberal arts associate degree program. See Classifying Community College Programs by Post-Completion Success in Transfer and Workforce for additional guidance.
- **Rationale:** Different workforce programs result in varying levels of employment and wages, depending on available jobs related to the field of study and local labor market conditions. Further, only some liberal arts associate degree programs prepare students for transfer with junior year standing into four-year colleges/universities (and thus a higher likelihood of bachelor's attainment). Classifying programs by likely post-completion outcomes can help college leaders understand the extent to which program completion—across all programs and within individual ones—contributes to the academic success and economic mobility of students. Furthermore, calculating the number and percentage of students, disaggregated by demographic group, in high- and low-value programs can help the college understand disparities in which subgroups of

students choose and complete programs with higher and lower levels of post-graduate opportunity.

**Workforce program awards by post-completion value**

- **Denominator:** 12-month unduplicated headcount
- **Measured:** Annually
- **Definition:** The number and percentage of students completing workforce/CTE programs in three categories: (1) high value—programs that result in graduates earning, on average, above the cost-of-living adjusted living wage in the service area in the first year after completion; (2) low value—programs that result in graduates earning, on average, approximately the prevailing wage for low-skill work in the region; and (3) medium value—programs that result in graduates earning, on average, more than low-value programs but less than the high-wage program threshold in the year after graduation. See Classifying Community College Programs by Post-Completion Success in Transfer and Workforce for additional guidance.
- **Rationale:** Research shows that, nationally, less than half of graduates with a community college associate degree and certificate (and not a bachelor's degree) earn more than $35,000 a year two years after graduation.[1] Colleges can use the program-level award by post-completion value metric to assess whether students are graduating from programs that are likely to result in jobs that pay at least a living wage. The metric should be used in conjunction with data on transfer and bachelor's degree success as well as median earnings among graduates one, five, and 10 years after graduation.

**Applied learning participation rates**

- **Denominator:** 12-month unduplicated headcount
- **Measured:** Biannually (semester) or annually
- **Definition:** The number and percentage of students participating in substantial experiential or applied learning experiences, providing preparatory skills for workforce and transfer programs.
- **Rationale:** Research shows that adults learn effectively when classroom education is combined with applied learning. In addition, research shows that students who participate in work-based learning earn more and are more likely than others to report

[1] Jenkins, D., and Wyner, J. (August 2022). Unlocking Opportunity: Rethinking Community College Programs to Ensure Equitable Post-Graduation Success. https://ccrc.tc.columbia.edu/easyblog/unlocking-opportunity-rethinking-community-college-programs.html.

that their education was worth the cost and helped them achieve their goals.[2] Applied learning can also help students become more competitive in job searches and transfer applications. Colleges can use this metric to assess the extent to which students engage in applied learning—which should be reflected in program maps—and whether there are disparities in which student subgroups are more likely to engage in applied learning opportunities. When combined with learning outcomes assessment data and post-graduation data on workforce and transfer outcomes, colleges can use applied learning rates to understand how well students are set up for success after community college.

**Passage of licensure exams**

- **Denominator:** The cohort of students completing credentials in each field that has a licensure exam for entering the industry
- **Measured:** Annually
- **Definition:** The number and percentage of students who complete programs and pass licensure exams in industries that require them.
- **Rationale:** Passing a licensure exam is necessary for students completing some programs to enter the field aligned to their program of study. This metric is an indicator of students' potential success in the labor market and can also help to measure the effectiveness of teaching and learning within programs.

**Average student debt after completion**

- **Denominator:** Completing cohort in selected year
- **Measured:** Annually
- **Definition:** The average amount of education-related debt (federal *and* private, if available) held by students upon completion of their postsecondary credential(s).
- **Rationale:** Surveys of unenrolled young adults find that many potential students are not pursuing higher education because they perceive college costs as too high.[3] Students who do enroll, especially students of color and those from low-income backgrounds, often take out loans, which can depress graduation rates, cut into future earnings, and repress wealth accumulation after exit.[4] College leaders can examine this metric to understand what financial burdens students are taking on and compare those burdens to the typical earnings premiums post-completion to inform how to adjust

[2] Torpey Sahoe, N., Leigh, E.W., Clayton, D. (2022). The Power of Work Based Learning. https://stradaeducation.org/wp-content/uploads/2022/03/031522-PV-report.pdf
[3] Lumina Foundation, "State of Higher Education 2023", retrieved from: https://www.luminafoundation.org/resource/the-state-of-higher-education-2023-report/
[4] Scott-Clayton, J. and Jing Li. (2016). "Black-white disparity in student loan debt more than triples after graduation." https://www.brookings.edu/articles/black-white-disparity-in-student-loan-debt-more-than-triples-after-graduation

tuition/costs, improve program quality, decrease time to credential, and allocate financial aid.

**Cohort default rate (CDR)**

- **Denominator:** Cohort of borrowing students entering repayment on a federal loan in a specific year
- **Measured:** Annually
- **Definition:** The share of student loan borrowers who fail to make a payment within a specific period of time (depending on the type of loan) after entering repayment (i.e., completing and not continuing into another higher education institution, dropping below half-time enrollment, or stopping out). The standard period of time measured is three years after entering repayment.
- **Rationale:** Students, especially students from low-income backgrounds and students of color, often meet college costs by taking out student loans, which can depress graduation rates, cut into future earnings, and repress wealth accumulation after exit.[5] The cohort default rate (CDR) is relevant to assessing return on investment and postsecondary opportunity, helping colleges understand which students (from which programs) are having trouble earning enough to meet their debt obligations. College leaders can leverage the CDR to identify where to target financial aid, improve career placement support, or reduce costs for students.

**Employment (1 year, 5 years, and 10 years after completion)**

- **Denominator:** Cohort that completed a credential in a selected year
- **Measured:** Annually
- **Definition:** The number and percentage of graduates with reported earnings one year, five years, and 10 years after completion of a credential at the community college. *Note: "Earnings" describes money generated from a salary or job.*
- **Rationale:** Research shows that one of the primary reasons students enroll in college is to increase job and career prospects.[6] Student employment one year after completion can provide a window into the post-completion value of workforce programs, and the five- and 10-year employment metrics are relevant for students who completed workforce programs as well as those who transferred to a bachelor's program. This

[5] Scott-Clayton, J. and Jing Li. (2016). "Black-white disparity in student loan debt more than triples after graduation." https://www.brookings.edu/articles/black-white-disparity-in-student-loan-debt-more-than-triples-after-graduation

[6] Strada Education Foundation. (2023). The Value of Community Colleges: Recent Students' Motivations and Outcomes. https://stradaeducation.org/wp-content/uploads/2023/09/090723-PV_report.pdf

metric should be examined in conjunction with graduates' earning data and enrollment in high-value programs to assess whether they have jobs that confer living wages.

**Median earnings (1 year, 5 years, and 10 years after completion)**

- **Denominator:** Cohort that completed a credential in a selected year
- **Measured:** Annually
- **Definition:** The median earnings of employed graduates one year, five years, and 10 years after completing a credential at the community college.
  *Note: "Earnings" describes money generated from a salary or job.*
- **Rationale:** Research shows that, nationally, less than half of graduates with a community college associate degree or certificate (and not a bachelor's degree) earn more than $35,000 a year within two years of graduation.[7] Colleges can use this metric to assess whether graduates receive an earnings premium after completing workforce programs and whether earnings are adequate to support an individual or family. This metric should be used in conjunction with transfer metrics to assess differences between earnings one year and five years after completion (by which time bachelor's degrees should be attained and earnings premiums emerge). A good source of earnings data (available in most states) is to match graduates with earnings in state unemployment insurance records, but these data exclude students who moved out of state after college.

**Inquiry Questions**

1. **Employment:** What is the employment rate of your graduates one, five, and 10 years after completion? How does this vary by student demographic? By program of study?
2. **Median Earnings:** What are the median earnings of your graduates one, five, and 10 years after completing their program of study? How does this vary by student demographic? By program of study? How do these earnings compare to your region's living wage standard?
3. **Applied learning participation:** What number and percentage of your students participate in high-quality applied learning aligned to their post-completion goals? How do these values relate to post-completion employment rates? How does this vary by student demographic? By program of study?

[7] Fink, J. & Jenkins, D. (2022). "How much are community college graduates earning two years later?" Accessed from: https://ccrc.tc.columbia.edu/easyblog/how-much-are-community-college-graduates-earning.html

4. **Passage of licensure exams:** What is the passage rate of licensure exams in programs that require them? Does this vary by student demographic? By program of study?
5. **Average student debt after completion:** What is the average student debt for those who complete a credential at your college? What would a typical monthly repayment amount be for someone who took out student loans to attend your college? How does this compare to typical median earnings, post-completion, by program of study?
6. **Cohort default rate (CDR):** What percentage of your graduates default on their student loans within three years of completion? How does this relate to their average student debt, their employment rates, and their typical median earnings? Which program's graduates are most likely to default on their student loans?
7. **High-value program enrollment:** Which programs at your college lead directly to opportunities for living-wage jobs? What percentage of students are enrolled in those programs? Are any student populations underrepresented in these high-value programs?
8. **Low-value pathways:** Which programs at your college lead to low-wage work? What percentage of students are enrolled in those programs? Are any student populations overrepresented in these programs?
9. **Labor market demand:**
    a. What are the most in-demand jobs in your region that pay a living wage? What is the minimum level of education they require?
    b. What are the top jobs in your region that require more than a high school diploma but less than a bachelor's degree? Which of those jobs pay a living wage?
    c. What are the fastest-growing employers and industries in your region? What do their jobs involve, and what does each offer in salary, benefits, and employment security?
10. **Employer satisfaction:** How satisfied are your employer partners with your graduates' skills and job performance?

## TRANSFER: MEASURES OF STUDENT SUCCESS

**Students with a full academic/transfer plan in their first academic year**

- **Denominator:** Entering degree-seeking cohort in a given year
- **Measured:** Biannually (or more frequently)
- **Definition:** The number and percentage of students who have in place a full workforce academic or transfer plan within the first 30 credit hours, reflecting a full academic plan

to completion for workforce/CTE programs or a specific pre-major program of study and transfer destination for transfer students.

- **Rationale:** Research shows that students who select a program within their first year of study are more likely to complete.[8] Similarly, research shows that community colleges achieving strong transfer outcomes create clear transfer program maps and provide transfer-specific advising to help students develop a plan to complete a bachelor's degree.[9] Assessing the number of students, disaggregated, who have complete plans in place can provide a valuable early indicator of whether they are likely to complete in a timely, efficient manner and, for those on transfer pathways, complete a bachelor's degree. For liberal arts/transfer students, this metric should be used in conjunction with transfer-out and bachelor's attainment rates.

### Students staying on a full academic/transfer plan

- **Denominator:** Number of students with a full-academic/transfer plan
- **Measured:** Biannually or Annually
- **Definition:** The number and percentage of students tracked with a full workforce academic or transfer plan who have taken all of the courses on their plan within their first semester (or academic year, if measured annually).
- **Rationale:** Research shows that students who select a program within their first year of study are more likely to complete their credential.[10] Similarly, research shows that community colleges achieving strong transfer outcomes create clear program maps and provide transfer-specific advising to help students develop a plan to complete a bachelor's degree.[11] This metric pushes the *Students with a full Academic/Transfer plan* metric a step further by identifying whether students are effectively following these plans.

### Transfer to bachelor's degree programs

- **Denominator:** All students who successfully transfer to a baccalaureate-granting institution within two or three years of entering the community college in a given year.
- **Measured:** Annually

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[8] Jenkins, D., & Cho, S.W. (2012). Get With the Program: Accelerating Community College Students' Entry Into and Completion of Programs of Study. Accessible at: https://ccrc.tc.columbia.edu/publications/get-with-the-program.html

[9] Wyner, J. & Deane, K.C. (2016). The transfer playbook: Essential practices for two- and four-year colleges. Retrieved from: https://www.aspeninstitute.org/wp-content/uploads/2016/05/aspen-ccrc_transferplaybook_05-2016.pdf

[10] Jenkins, D., & Cho, S.W. (2012). Get With the Program: Accelerating Community College Students' Entry Into and Completion of Programs of Study. Accessible at: https://ccrc.tc.columbia.edu/publications/get-with-the-program.html

[11] Wyner, J. & Deane, K.C. (2016). The transfer playbook: Essential practices for two- and four-year colleges. Retrieved from: https://www.aspeninstitute.org/wp-content/uploads/2016/05/aspen-ccrc_transferplaybook_05-2016.pdf

- **Definition:** The percentage and number of students who transfer into a bachelor's degree program within two or three years of entry to the community college, either by transferring to a four-year college or university or entering a community college bachelor's program.
- **Rationale:** Research shows that the majority of "good jobs" in the United States require a bachelor's degree (or higher levels of higher education).[12] Bachelor's degree holders, on average, earn 75 percent more over their lifetime than those with a high school diploma and have median annual earnings of approximately $70,000 (higher for those who go on to earn an advanced degree).[13] Accordingly, community colleges should assess how many of their students take the necessary step of entering a bachelor's granting program.

**Transfer to bachelor's degree programs (with award)**

- **Denominator:** Students in an entering cohort completing an associate degree
- **Measured:** Biannually (semester) or annually
- **Definition**: The percentage and number of students in an entering cohort who transfer to a bachelor's program and earned an associate degree prior to transfer.
- **Rationale**: Research shows that community college students who attain associate degrees prior to transferring to a four-year institution are more likely to attain a bachelor's degree, both overall and within different student subgroups.[14] This metric provides an indicator of whether students who transfer will attain a bachelor's degree. It is also relevant to state appropriations levels for community colleges in states that provide performance funding tied to associate degree attainment and/or four-year transfer.

**Bachelor's completion rate six years after community college entry**

- **Denominator:** Entering degree/credential-seeking cohort
- **Measured:** Annually
- **Definition**: The percentage of students who complete a bachelor's degree within six years of their initial enrollment at the community college, disaggregated by race/ethnicity, socioeconomic status, gender, age, and other relevant student subgroups. Colleges may also choose to assess bachelor's completion rates within four years of community college entry to assess the effectiveness of 2+2 pathways.

[12] Strohl, J., Gulish, A., and Morris, C. (2024). The future of good jobs: Projections through 2031. Accessible at: https://cew.georgetown.edu/wp-content/uploads/cew-the_future_of_good_jobs-fr.pdf

[13] Carnevale, A.P., Cheah, B., & Wenzinger, E. (2021). The college payoff: More education doesn't always mean more earnings". Accessible at: https://cew.georgetown.edu/wp-content/uploads/cew-college_payoff_2021-fr.pdf

[14] Kopko, E., & Crosta, P. (2016). "Should community college students earn an associate degree before transferring to a 4-Year institution?" *Research in Higher Education*, 57(2), 190-222.

- **Rationale**: Research shows that the majority of "good jobs" in the United States require a bachelor's degree.[15] While there is programmatic variation, bachelor's degree holders, on average, earn 75 percent more over their lifetime than those with a high school diploma and have median annual earnings of approximately $70,000 (higher for those who earn advanced degrees).[16] Accordingly, community colleges should assess the extent to which their programs and advising systems result in students attaining a bachelor's degree. People of color and lower-income populations are less likely than other students to hold a bachelor's, more likely to enter higher education in a community college, and less likely to transfer and attain a bachelor's degree. Disaggregating rates and numbers of students who attain bachelor's degrees can provide a window into whether the community college is effectively advancing bachelor's attainment among those populations.

**Inquiry Questions**

1. ***Transfer to bachelor's degree programs:*** At what rate do your college's students transfer to a bachelor's degree program within two or three years of entry? How are the numbers and rates trending? How do the transfer rates compare with national and peer institutions' averages? How does this vary by student demographics and program of study?
2. ***Transfer to bachelor's degree programs (with award):*** What percentage and number of your college's students who transfer to a bachelor's program also complete an associate degree or other award before transferring? Do students who transfer with an award have different bachelor's attainment rates than those who do not? How does this vary by student demographics, program of study, and four-year destination?
3. ***Bachelor's completion rate six years after community college entry*:** What are your college's overall and disaggregated bachelor's completion rates six years after entering your community college? How do these compare with the national and peer institutions' averages? How do bachelor's completion rates differ by program of study taken at the community college? By student demographics?
4. ***Students with a full academic/transfer plan:*** How many students (and what share of total college enrollment) have a full pre-major transfer plan in place? How many students with such a plan have chosen a priority transfer destination? How many

[15] Strohl, J., Gulish, A., and Morris, C. (2024). The future of good jobs: Projections through 2031. Accessible at: https://cew.georgetown.edu/wp-content/uploads/cew-the_future_of_good_jobs-fr.pdf

[16] Carnevale, A.P., Cheah, B., & Wenzinger, E. (2021). The college payoff: More education doesn't always mean more earnings". Accessible at: https://cew.georgetown.edu/wp-content/uploads/cew-college_payoff_2021-fr.pdf

have a plan in place within their first academic year (30 credits)? How does this vary by student demographic?

5. ***Students staying on a full academic/transfer plan:*** How many students—and what share of students with transfer plans—are still on track after 15 credit hours? 30 credit hours? 45 credit hours? How do these outcomes vary by student demographics?
6. ***Transfer destinations*:** Which four-year institutions (or baccalaureate-granting community colleges) do your students most frequently transfer to? How do transfer-out numbers and bachelor's completion rates differ among those frequent transfer partners, overall and among different demographic groups?
7. ***Bachelor's demand in the regional labor market*:** Which jobs in your region typically require (or prefer) at least a bachelor's degree and offer substantial numbers of job opportunities? Do the programs taken by your pre-transfer students set them up for bachelor's degrees that align with those jobs?

## COMPLETION: MEASURES OF STUDENT SUCCESS

**Gateway course completion rates in the first academic year**

- **Denominator:** Headcount of first-year students
- **Measured:** Bi-annually (semester)
- **Definition:** The percentage of students completing transfer-level English, transfer-level math, and their program of study's gateway course (e.g., introduction to psychology, anatomy and physiology, business analytics, etc.) within their first 30 credit hours. These data should be displayed separately for English, math, and specific program gateway courses. Data also should be aggregated at the program and college-wide level to reveal trends as well as differences between courses and programs.
- **Rationale:** Research shows that students who pass gateway courses in their first 30 credits are more likely to complete credentials.[17] Without structures designed to lead to high rates of gateway course completion in the first year, students often delay taking transfer-level math, English, and gateway program courses until the second year of associate degree programs. As a result, students may delay a sense of connection to their programs, take courses that do not apply to their degrees, and have lower graduation rates.

[17] Flanders, G. R. (2017). The Effect of Gateway Course Completion on Freshman College Student Retention. Journal of College Student Retention: Research, Theory & Practice, 19(1), 2-24; Belfield, C.R., Jenkins, D., and Fink, J. (2019). Early Momentum Metrics: Leading Indicators for Community College Improvement.

**Credit hour accumulation ("credit intensity")**

- **Denominator:** Cohort of unduplicated headcount, degree-/credential-seeking
- **Measured:** Biannually (semester)
- **Definition:** The average number of credits earned by all students enrolled in a single semester (or quarter) and across each 12-month period. Colleges may set thresholds for credit hour completion milestones and assess the percentage and number of students that meet them in specific timeframes (e.g., percentage of students successfully completing 15 credit hours in the first term, 30 credit hours in the first year, and 45 credit hours by the end of the third term).
- **Rationale:** Research shows a positive correlation between the rate at which credits are earned and the likelihood of completion.[18] Colleges can use the average number of credits earned by semester and year to assess the extent to which college systems, policies, and supports are helping students complete more credits and earn a credential. When combined with increases in the number of students on a program path, increases in credit accumulation can be a strong predictor of increased credential attainment.

**Students with a full academic/transfer plan in their first academic year**

- **Denominator:** 12-month unduplicated headcount
- **Measured:** Biannually
- **Definition:** The number and percentage of students tracked with a full workforce academic or transfer plan within the first 30 credit hours, reflecting a full academic plan to completion for workforce/CTE programs, or a specific pre-major program of study and transfer destination for transfer students.
- **Rationale:** Nationally, many community colleges have engaged in guided pathways reforms that include creating clear maps for every program of study as well as plans to translate those maps into academic plans for each student within the first semester or year. Research has shown that guided pathways reforms can improve student completion rates.[19] Assessing the number and percentage of students who have plans in place can provide a valuable early indicator of whether they are likely to complete in a timely, efficient manner. The metric also helps evaluate how effectively the institution's advisors are engaging with students, especially early in their time at college. Additionally, research shows community colleges that achieve strong transfer

[18] Belfield C., Jenkins, D, & Lahr, H. (2016). Momentum: The academic and economic value of a 15-credit first-semester course load for college students in Tennessee. Retrieved from: https://ccrc.tc.columbia.edu/publications/momentum-15-credit-course-load.html

[19] Jenkins, D., Lahr, H., and Brock, T. (2024). Lessons from two major evaluations of Guided Pathways. https://ccrc.tc.columbia.edu/media/k2/attachments/lessons-two-major-evaluations-guided-pathways.pdf

outcomes create clear four-year program maps, from enrollment through bachelor's attainment, and provide transfer-specific advising to help students develop a plan to complete a bachelor's degree. This metric can be used to monitor how well the college helps transfer-intending students select and complete programs of study that are likely to lead to bachelor's degrees.

**Students staying on a full academic/transfer plan**

- **Denominator:** Number of students with a full-academic/transfer plan
- **Measured:** Biannually or Annually
- **Definition:** The number and percentage of students tracked with a full workforce academic or transfer plan who have taken all of the courses on their plan within their first semester (or academic year if measured annually).
- **Rationale:** Research shows that students who select a program within their first year of study are more likely to complete than those who do not.[20] Similarly, research shows that community colleges achieving strong transfer outcomes create clear program maps for students and provide transfer-specific advising to help them develop a plan to complete a bachelor's degree.[21] This metric pushes the *Students with a full Academic/Transfer plan* metric a step further by identifying whether students are effectively following these plans.

**Graduation in 100% and 150% of intended time**

- **Denominator:** Entry cohort of degree-/credential-seeking students
- **Measured**: Annually
- **Definition:** The number and percentage of students in a starting cohort (for-credit students only) who graduate with the credential sought within 100% and 150% of intended program length (e.g., three years for a two-year, 60-credit associate degree program). This metric should always be disaggregated by award type.
- **Rationale:** Research shows that community college students who complete degrees/credentials have stronger labor market outcomes, transfer and bachelor's

[20] Jenkins, D., & Cho, S.W. (2012). Get With the Program: Accelerating Community College Students' Entry Into and Completion of Programs of Study. Accessible at: https://ccrc.tc.columbia.edu/publications/get-with-the-program.html

[21] Wyner, J. & Deane, K.C. (2016). The transfer playbook: Essential practices for two- and four-year colleges. Retrieved from: https://www.aspeninstitute.org/wp-content/uploads/2016/05/aspen-ccrc_transferplaybook_05-2016.pdf

attainment rates, and student debt-repayment rates than those without.[22] College leaders can use this metric to monitor completion rates overall at the college, by program, and for different student populations. Graduation rates and related indicators (see below) can be used to identify needed improvements in advising, program mapping and planning, student supports, financial aid, and other strategic areas aligned with college completion.

**Credentials per 100 FTE**

- **Denominator:** Full-time equivalent enrollment
- **Measured:** Annually
- **Definition**: The number of credentials of one year or greater in length awarded in a given year divided by 100 full-time equivalent students (defined as 15 credits per semester, 30 credits per year for undergraduates). In the numerator, associate degrees should be counted twice as much as certificates, and bachelor's degrees should count four times as much as certificates to ensure that the ratio accounts for the different lengths of time to these degrees. This metric should be assessed in conjunction with graduation rates.
- **Rationale:** This ratio is valuable only as a way to gather comparative data on completion rates using federal data. Because federal data on graduation rates do not capture all students—including the majority of community college students who attend part-time—credentials per 100 FTE can be a useful way for community colleges to compare their completion rates with peer institutions. Credentials per 100 FTE are subject to inflation at times of enrollment declines and deflation at times of enrollment gains. For this reason, credentials per 100 FTE are more valuable as a static measure to compare college outcomes with those of peers and less valuable as an indication of trends over time. Colleges with volatile enrollment may choose to average enrollment over several years to create a more stable denominator. Additionally, community colleges may choose to remove dual credit/dual enrollment students from the denominator because they often don't intend to complete a credential at that college.

**Time to credential**

- **Denominator:** Entry cohort of degree-/credential-seeking students

[22] Carnevale, A.P., Cheah, B., & Wenzinger, E. (2021). The college payoff: More education doesn't always mean more earnings". Accessible at: https://cew.georgetown.edu/wp-content/uploads/cew-college_payoff_2021-fr.pdf; Velasco, T., Fink, J., Bedoya, M., Jenkins, D., and LaViolet, T. (2024). Tracking transfer: Four-year institutional effectiveness in broadening bachelor's degree attainment. Accessible at: https://highered.aspeninstitute.org/wp-content/uploads/2024/02/CCRC-ASP-NSCRC-TT-4Y-Report_Final.pdf; Itzkowitz, M. (2018). Want more students to pay down their loans? Help them graduate. Accessible at: https://thirdway.imgix.net/pdfs/want-more-students-to-pay-down-their-loans-help-them-graduate.pdf

- **Measured**: Annually
- **Definition**: The average number of years between first enrollment at the community college and completion of a credential.
- **Rationale**: Research shows that increased time to attain a credential is negatively correlated with credential completion.[23] By providing a window into how quickly students complete credentials, this metric can inform leaders' assessments of (1) the effectiveness of advising and academic planning in pointing students toward specific courses needed for their intended credentials, (2) the availability of courses students need to complete their credentials, and (3) students' return on investment for their time at the community college, which includes the opportunity cost of not earning wages. College leaders can use this metric to assess the college as a whole as well as programs of study.

**Credits per credential; excess credits upon completion**

- **Denominator:** Annual entry cohort, degree-/credential-seeking students
- **Measured**: Annually
- **Definition:**
  Credits per credential: The average number of credits accumulated by students who complete credentials, measured from initial enrollment in postsecondary education. If developmental education courses do not confer credits, do not include them. The effect of developmental education courses will be captured in time to credential if examined alongside credits per credential.
  Excess credits at completion: The average number of extra credits earned by completers beyond the number required (e.g., if the average number of credits earned for a 60-credit associate degree is 87, the average excess credits would be 27).
- **Rationale**: By providing a window into how efficiently students complete credentials, these metrics offer valuable information on (1) the value students receive, because the true cost of completing a credential includes both tuition and fees for courses not needed to complete and the opportunity cost of lost wages, and (2) the reasons students may not complete, because the longer it takes to earn a credential, the more likely life circumstances will interfere. These metrics can provide college leaders valuable insights into how well academic plans are structured, whether students are following clear academic plans, and cost efficiency for students.

[23] Center for Community College Student Engagement. (2017). Even one semester: Full-time enrollment and student success. Austin, TX: The University of Texas at Austin, College of Education, Department of Educational Administration, Program in Higher Education Leadership; Belfield, C., Jenkins, D., and Lahr, H. (2016). Momentum: The academic and economic value of a 15-credit first-semester course load for college students in Tennessee. https://ccrc.tc.columbia.edu/media/k2/attachments/momentum-15-credit-course-load.pdf.

**Inquiry Questions**

1. ***First-year gateway course completion rates:*** What percentage of students complete, in their first year, credit-bearing math, credit-bearing English, and key courses for programs of study (e.g., introduction to psychology, business analytics, anatomy, and physiology)?
2. ***Credit hour accumulation ("credit intensity"):*** What is the average number of credits attempted and completed by students each year? How is that number changing over time? What percentage of students meet particular milestones (e.g., 15 credits or 30 credits a year)?
3. ***Students with a full academic/transfer plan:*** What percentage of your students have an individualized academic plan in place to complete a program of study? What percentage of students have a plan aligned with transfer or workforce success? At what rate do students who have these plans complete a certificate or transfer to a four-year institution relative to students who do not? How do these outcomes vary by student demographics?
4. ***Students staying on a full academic/transfer plan:*** How many students—and what share of students with academic plans—are still on track to complete those plans after 15 credit hours? 30 credit hours? 45 credit hours? How do these outcomes vary by student demographics
5. **Graduation in 100% and 150% of intended time:**
    a. **College-wide:** What is your graduation rate for all students (including part-time) in two and three years? How does it vary by subgroups? How does your three-year graduation rate for first-time, full-time students in IPEDS (150% time) compare to the national average and to the average among peer community colleges?
    b. **By program:** What is the graduation rate in two and three years by program of study? Which programs have the highest and lowest completion rates? Which programs have the most and least completers? How do these metrics vary by student subgroups?
    c. **By part-time status:** What is the graduation rate of your part-time students? How does this compare to full-time students? Which student demographic groups are most likely to attend part-time?
6. **Credentials per 100 FTE:** How do your credentials awarded per 100 FTE students compare to national averages? Relative to other schools, is your credentials per 100 FTE rate better or worse? What does this tell you about the outcomes of full-time and part-time students?

7. **Time to credential:** On average, how many terms does it take a student to complete a credential? How has this changed over time?
8. **Credits per credential/excess credits upon completion:** On average, how many credits has a student accumulated upon completion? How does this compare to the number of credits required? How are these metrics changing over time?

## TEACHING AND LEARNING: MEASURES OF STUDENT SUCCESS

**Sequential course success**

- **Denominator:** Students who complete both courses in a two-course sequence in an area of study
- **Measured:** Annually
- **Definition:** The number and percentage of students who take and complete both courses in a structured core two-course sequence (e.g., English 101 and English 102) in their program of study, in math, and in English, disaggregated by race/ethnicity, socioeconomic status, gender, and age. Ideally, students would take the second course in the term immediately following the first course so the data could be reported accurately in a single academic year.
- **Rationale:** Students successfully passing both courses in a sequence can be used to assess whether student learning in early-level courses was strong enough to enable students to succeed in subsequent ones. Faculty and leaders can use this analysis to assess the extent to which courses in programs of study and disciplinary sequences are aligned, the impact of course scheduling on student success, and the effectiveness of faculty in early sequence courses.

**Course completion rate**

- **Denominator:** Total number of courses attempted in a semester
- **Measured:** By semester/term
- **Definition:** The percentage of attempted courses in which students successfully complete. This analysis is typically done separately for credit-bearing courses, non-credit courses (including developmental education), and dual enrollment courses.
- **Rationale:** Passing a course is an indicator that a student learned the material. Alone, this is an imperfect measure, as research has demonstrated that the amount of student learning in completed courses varies substantially. For this reason, other assessments of student learning should be used in conjunction with this one. Additionally, rates of course completion are correlated to graduation rates as well as maintaining good academic standing for financial aid. However, without clear education plans aligned to

post-graduation success, improving course completion rates alone may not lead to substantially improved graduation rates.

**Applied learning participation**

- **Denominator:** 12-month unduplicated headcount
- **Measured:** Biannually (semester) or annually
- **Definition:** The number and percentage of students participating in substantial experiential or applied learning experiences (e.g., internships, apprenticeships, service learning, etc.), helping prepare students for workforce and transfer programs.
- **Rationale:** Research shows that adults learn more when classroom education is combined with practical experience in the workplace. In addition, students who participate in work-based learning see a positive impact on their earnings and are more likely to say their education was worth the cost and helped them achieve their goals.[24] Applied learning can also help students become more competitive in job searches and transfer applications. Colleges can use this metric to track, over time, the number and percentage of students who engage in applied learning—which should be reflected in program maps—and whether there are disparities in which groups of students engage in such learning. College faculty and leaders can best understand the impact of applied learning when combined with learning outcomes assessment data. In addition, when both work based learning and learning outcome assessment data are viewed alongside post-graduation data on workforce and transfer outcomes, leaders can understand how well their college is setting students up for success after community college.

**Course and program learning outcomes assessment**

- **Denominator:** All degree- or credential-seeking students
- **Measured:** Annually
- **Definition**: The rate at which students meet learning outcomes that are set at the course and program levels. To assess student learning, each course and each program should have specific and measurable learning outcomes.
- **Rationale**: Leaders can use course and program learning outcomes data for several purposes, including assessing college-wide gaps in learning specific content or skills (e.g., critical thinking or writing), program effectiveness, and faculty performance. Standardized tests can be used to benchmark learning outcomes against other colleges and national averages, highlighting additional areas for improvement.

[24] Torpey Sahoe, N., Leigh, E.W., Clayton, D. (2022). The Power of Work Based Learning. https://stradaeducation.org/wp-content/uploads/2022/03/031522-PV-report.pdf

**GPA after transfer**

- **Denominator:** Students in a starting cohort at the community college who transferred to a four-year institution
- **Measured:** Annually
- **Definition:** The GPA of students after transferring from the community college to a specific four-year institution in their first year and at graduation compared to the GPA of students who started at the four-year institution. We recommend that community colleges aim to track this measure for all four-year partners that receive at least 10% of their transfer students. Sharing these data with leaders, faculty, and administrators at four-year partners can be used to strengthen learning, credit mobility, and other outcomes for transfer students.
- **Rationale:** Because most community college students aim to earn a bachelor's degree (which are required for most good jobs nationally), it is important for leaders to understand the extent to which students are succeeding in attaining a bachelor's. Alongside transfer-out and bachelor's attainment rates, comparative GPAs can help colleges assess the extent to which students are succeeding or struggling after transfer and use that information to investigate the reasons and make changes at the institutional, program, or classroom level. Note: If students transfer to four-year colleges or universities with low graduation rates, this metric will have limited value and should give way to an examination of bachelor's attainment rates.

**Inquiry Questions**

1. **Course completion rate:** What is your college's overall course completion rate? How has it changed over time? How does this rate vary by student demographic? How does it vary by program and discipline? By credit versus noncredit versus dual enrollment?
2. **Sequential course success:** What percentage of students successfully pass a second course in a course sequence at your college (e.g., intro to economics, macroeconomics, microeconomics)? In which programs are students most likely to pass a sequence? In which are they least likely to pass? Does success in subsequent courses vary by which faculty taught the prior course?
3. **Applied learning participation:** What percentage of students participate in high-quality experiential or applied learning? How does this vary by student demographic? By program of study? Are applied learning rates correlated to higher levels of completion? Higher levels of transfer/bachelor's completion? Higher rates of workforce success?

4. **Course and program learning outcomes assessment:** Which courses and programs excel in helping students achieve program learning outcomes? Which courses and programs are least likely to meet learning outcomes? For each program, are there specific courses that are most and least likely to achieve learning outcomes?
5. **GPA after transfer:** Are your students' GPAs strong after they transfer to four-year institutions? How does that compare to students who transferred from other colleges? To students who started at the same four-year schools as freshmen? How does this vary by student demographic? By four-year school? By the associate degree program in which students were enrolled at your community college? By students who completed an associate degree before transfer versus those who did not?

## ACCESS: MEASURES OF STUDENT SUCCESS

**Dual enrollment participation**

- **Denominator:** Service area high school population
- **Measured: Annually**
- **Definition:** The number of students in dual enrollment classes by high school and by student subgroup. Colleges should compare (1) the percentage of dual enrollment students from each subgroup at each high school versus the percentage of all students by subgroup at the same high school and (2) the percentage of dual enrollment students from each subgroup at the college versus the percentage of non-dual enrolled students at the college by subgroup.
- **Rationale:** Dually enrolled students represent a large and growing proportion of U.S. community college enrollments. These metrics enable college leaders to identify the number of high school students participating and the differences in groups of students benefiting from these programs. Nationally, enrollment in dual enrollment programs is inequitable.[25] Colleges that have strategically enrolled diverse high school students in dual enrollment courses have seen increases in the percentages of dual enrolled students who enroll at the community college after high school.

**Enrollment compared to high school and service area demographics**

- **Denominators:** 12-month enrollment / Service Area Demographics and High School Demographics
- **Measured:** Annually

[25] Fink, John. October 2023. Greater Equity in College Access Through High School/College Dual Enrollment Programs. https://collegecampaign.org/wp-content/uploads/2023/10/FINAL-EIA-Dual-Enrollment-comp.pdf

- **Definition:** The percentage of enrolled students (using 12-month unduplicated headcount) by demographic group compared to the demographic composition of (1) service area high schools, and (2) all people in the service area.
- **Rationale:** Community colleges offer access to individuals who might not otherwise attend college, including recent high school graduates, incumbent workers, and unemployed adults. These metrics can help college leaders assess how well the college is serving those populations. By identifying demographic groups that are underrepresented in higher education and at the college (by high school and overall), leaders can better understand where to focus strategies to reach students and enroll them in programs of value.

**Full Time Equivalent (FTE) enrollment**

- **Denominator:** All students enrolled in for-credit programs
- **Measured:** By semester or by year
- **Definition:** The number of FTE students is calculated based on instructional activity reported by the institution. Colleges on a semester, trimester, or 4-1-4 system should calculate FTE by identifying the cumulative number of credit hours taken and dividing by 30. Colleges on a quarterly system should divide the cumulative number of credit hours by 45.[26]
- **Rationale:** Full-time equivalent enrollment can provide valuable information on student access -- overall and by disaggregated demographics -- and is also relevant to institutional revenue. Additionally, research shows that many students switch between full-time and part-time status. For this reason, FTE enrollment provides a better measure of access, enrollment trends, and demand for courses than measures related to headcount – overall or by full-time and part-time status.

**12-month unduplicated headcount**

- **Measured:** Annually
- **Definition:** An unduplicated headcount of the total number of students enrolled throughout a 12-month reporting period. Students typically included are those enrolled in any courses for credit leading to a degree or other recognized postsecondary credential, as well as those enrolled in credit-bearing courses that are part of a terminal vocational or occupational program.[27] Collages should also gather a separate headcount of students in non-credit courses – with specific counts for large-scale

[26] National Center for Education Statistics (2024), IPEDS Glossary. https://surveys.nces.ed.gov/ipeds/public/glossary
[27] National Center for Education Statistics (2024), IPEDS Glossary. https://surveys.nces.ed.gov/ipeds/public/glossary

programs such as ABE, GED, ESOL, and continuing workforce education – as well as the number and percentage of non-credit students in each large-scale program each year that take credit courses in the subsequent year.

- **Rationale:** Because community colleges often enroll students across multiple entry points in a year, this metric can provide a more complete picture of the student body than an enrollment count taken at a single point in time (typically in the Fall). This count is a denominator for many of the rates identified across the indicator guide. Gathering information on the above metrics about non-credit students can provide a window into issues related to resource allocation, mobility of underserved students into valuable degree programs, and enrollment trends among potential groups of credit students.

**Inquiry Questions**

1. **College-going rate in service area**: What is the overall college-going rate in your service area as a whole and by demographic group? What differences stand out among the different demographic groups?
2. **Enrollment compared to high school and service area demographics:** What is the demographic breakdown of your service area considering characteristics such as age, race, gender, or income? How does your student population reflect the demographics of your service area?
3. **Dual enrollment participation and yield:** How do the demographics of your dual enrollment students reflect the broader population of your service area? Of the current high school population? Where are there gaps in who is served? What percentage of your dual enrollment students enroll at your college after high school?
4. **Enrollment in high-value programs (12-month unduplicated enrollment/FTE enrollment):** In your high-value programs, how does enrollment vary by different student demographics? How does enrollment in high-value programs vary by different student demographics? Where are there gaps?
5. **Enrollment in low-value programs**: How does enrollment in low-value pathways (e.g., undecided, general studies, workforce programs aligned to low-wage work) vary by different student demographics? Where are there gaps?