

**Connection Title:** College preparatory coursework completion: Percentage of high school graduates who successfully complete the coursework required for admission to a four-year college or university

**Selected Descriptors:**

Educational Process: Classroom Perspectives->Academic Persistence  
Educational Process: School Perspectives->College Admission  
Students, Teachers, School Personnel->College Bound Students  
Students, Teachers, School Personnel->High School Graduates

**Author:** Education-to-Workforce Framework Collaborators Group

**Location:** More Than One State

**Source for CEDS Connection Information:** Education-to-Workforce Indicator Framework  
(<https://educationtoworkforce.org/>)

**Description of CEDS Connection:**

This Connection identifies the CEDS elements needed to measure the percentage of high school graduates who successfully complete the coursework required for admission to a four-year college or university. (See the General Connection Information label for the metric's full title.) The recommended analysis criteria are also included. This Connection supports the Education-to-Workforce Indicator Framework.

**Go Further with this Connection**

You can use this Connection with your own data system. Click on the myConnect logo to apply the elements from your shared map to this Connection.



► **Data Elements**

**Metric**

**CEDS Elements:**

A. K12 -> Course Section -> Course Section Identifier  
B. K12 -> Course Section -> Session Type  
C. K12 -> K12 Course -> Course Identifier  
D. K12 -> K12 Course -> School Courses for the Exchange of Data Course Code  
E. K12 -> K12 Course -> School Courses for the Exchange of Data Course Subject Area  
F. K12 -> K12 Course -> School Courses for the Exchange of Data Sequence of Course  
G. K12 -> K12 School -> Directory -> Grades Offered  
H. K12 -> K12 School -> Directory -> School Level  
I. K12 -> K12 School -> Identification -> School Identification System  
J. K12 -> K12 School -> Identification -> School Identifier  
K. K12 -> K12 School -> Session -> School Year  
L. K12 -> K12 School -> Session -> Session Type  
M. K12 -> K12 Student -> Academic Record -> Diploma or Credential Award Date  
N. K12 -> K12 Student -> Academic Record -> Grade Value Qualifier  
O. K12 -> K12 Student -> Academic Record -> Student Course Section Grade Earned  
P. K12 -> K12 Student -> Enrollment -> Cohort Graduation Year  
Q. K12 -> K12 Student -> Enrollment -> Exit or Withdrawal Type  
R. K12 -> K12 Student -> Identity -> Student Identification System  
S. K12 -> K12 Student -> Identity -> Student Identifier  
T. K12 -> LEA -> Identification -> Local Education Agency Identification System  
U. K12 -> LEA -> Identification -> Local Education Agency Identifier  
V. K12 -> SEA -> Identification -> State Agency Identification System

**Elements Not Currently in CEDS:**

**Disaggregates**

**CEDS Elements:**

A. Adult Education -> AE Student -> Status -> Low-income Status  
B. Early Learning -> Early Learning Family -> Family/Household Information -> Family Income  
C. K12 -> K12 School -> Directory -> School Type  
D. K12 -> K12 Student -> Demographic -> Birthdate  
E. K12 -> K12 Student -> Demographic -> Hispanic or Latino Ethnicity  
F. K12 -> K12 Student -> Demographic -> Military Connected Student Indicator  
G. K12 -> K12 Student -> Demographic -> Race  
H. K12 -> K12 Student -> Demographic -> Rural Residency Status  
I. K12 -> K12 Student -> Demographic -> Sex  
J. K12 -> K12 Student -> Disability -> Disability Status  
K. K12 -> K12 Student -> Disability -> IDEA Indicator  
L. K12 -> K12 Student -> Disability -> Primary Disability Type  
M. K12 -> K12 Student -> Disability -> Section 504 Status  
N. K12 -> K12 Student -> Discipline -> Disciplinary Action Taken  
O. K12 -> K12 Student -> Economically Disadvantaged -> Eligibility Status for School Food Service Programs  
P. K12 -> K12 Student -> English Learner -> English Learner Status  
Q. K12 -> K12 Student -> English Learner -> Program Participation Exit Date  
R. K12 -> K12 Student -> English Learner -> Program Participation Start Date  
S. K12 -> K12 Student -> Homeless -> Homeless Serviced Indicator

**Elements Not Currently in CEDS:**

T. K12 -> K12 Student -> Homeless -> Homelessness Status  
 U. K12 -> K12 Student -> Homeless -> Status End Date  
 V. K12 -> K12 Student -> Homeless -> Status Start Date  
 W. K12 -> K12 Student -> Individualized Program -> IDEA Disability Type  
 X. K12 -> K12 Student -> Individualized Program -> Student Support Service Type  
 Y. K12 -> K12 Student -> Language -> ISO 639-3 Language Code  
 Z. K12 -> K12 Student -> Migrant -> Migrant Status  
 AA. K12 -> K12 Student -> Migrant -> Program Participation Exit Date  
 AB. K12 -> K12 Student -> Migrant -> Program Participation Start Date  
 AC. K12 -> K12 Student -> Program -> Program Participation Exit Date  
 AD. K12 -> K12 Student -> Program -> Program Participation Start Date  
 AE. K12 -> K12 Student -> Program -> Program Participation Status  
 AF. K12 -> K12 Student -> Program -> Program Type  
 AG. K12 -> Organization -> Identification -> Organization Type  
 AH. K12 -> Parent/Guardian -> Education -> Highest Level of Education Completed

## ► Analysis Recommendations

### General Connection Information

CEDS elements are shown in **bold/italicized** font.

This metric is part of the Education-to-Workforce (E-W) Indicator Framework, specifically "Outcomes and Milestones" which pertain to key outcomes and milestones along the E-W continuum strongly associated with people achieving economic mobility and security.

This metric is a measurement for a key indicator, "College preparatory coursework completion," and is about high school students meeting typical coursework requirements for admission to a four-year college.

### Calculating a Response

*Metric: Percentage of high school graduates who successfully complete the coursework required for admission to a four-year college or university, which includes:*

- *Four years of English classes*
- *Four years of math classes (including at least four of the following: pre-algebra, algebra, geometry, Algebra II or trigonometry, precalculus, calculus, statistics, quantitative reasoning, and data science)*
- *Three years of laboratory science (including biology, chemistry, and physics)*
- *Two years of social sciences*
- *Two years of foreign language*
- *One year of visual or performing arts*

Determine the **Cohort Graduation Year** for which the data are being reported.

Use the following CEDS elements to determine the universe of students:

Pull all unique students which is determined by using a unique **Student Identifier** where **Student Identification System** = State

Where the student:

- is associated with a State Education Agency through the **State Agency Identifier** where **State Agency Identification System** = SEA
- is associated with a Local Education Agency through the **Local Education Agency Identifier** where **Local Education Agency Identification System** = SEA
- is associated with a K12 school through the **School Identifier** where **School Identification System** = SEA

Narrow the list of schools to include only high schools:

- Filter records where **School Level** = 02402 (High School)
- Filter records where **Grades Offered** - 09, 10, 11, 12

From the universe of students, count the number of students who graduated high school during the cohort graduation year:

Filter records where:

- **Exit or Withdrawal Type** = 01921 (Graduated with regular, advanced, International Baccalaureate, or other type of diploma), and
- **Diploma or Credential Award Date** is = **Cohort Graduation Year**

#### ENGLISH

From the list of students who graduated high school during the cohort graduation year, pull the students who successfully completed four years of English:

- Pull all courses where **School Courses for the Exchange of Data Course Subject Area** = 01 (English Language and Literature), **School Courses for the Exchange of Data Sequence of Course** is = 4, **Student Course Section Grade Earned** is not null, and
- **Grade Value Qualifier** = A, B, C or D (depending on the state's criteria for pass/fail). (NOTE: if your school does not use SCED codes, you would need to count the number of English courses the student completed using **Course Identifier** and **Course Section Identifier**.) This count should also include courses that are split over two semesters which is determined by using **Session Type** = Semester).

#### MATH

From the graduates who successfully completed four years of English, pull the students who successfully completed four years of math:

Pull all courses where **School Courses for the Exchange of Data Course Subject Area** - 02 (Mathematics), **School Courses for the Exchange of Data Sequence of Course** is = 4, **Student Course Section Grade Earned** is not null, and

**Grade Value Qualifier** = A, B, C or D (depending on the state's criteria for pass/fail). (NOTE: if your school does not use SCED codes, you would need to count the number of English courses the student completed using **Course Identifier** and **Course Section Identifier**.) This count should also include courses that are split over two semesters which is determined by using **Session Type** = Semester). The list of courses must include at least four of the following:

- Pre-algebra where SCED Code = 02051
- Algebra where SCED Code = 02052
- Geometry where SCED Code = 02072
- Algebra II or trigonometry where SCED Code = 02056, 02106
- Precalculus where SCED Code = 02110
- Calculus where SCED Code = 02121
- Statistics where SCED Code = 02205
- Quantitative reasoning where SCED Code = 02158
- Data science where SCED Code = 22161

#### LABORATORY SCIENCE

From the graduates who successfully completed four years of English and Math, pull the students who successfully completed three years of laboratory science:

Pull all courses where **School Courses for the Exchange of Data Course Subject Area** = 03 (Life and Physical Sciences), **School Courses for the Exchange of Data Sequence of Course** is = 3, **Student Course Section Grade Earned** is not null, and **Grade Value Qualifier** = A, B, C or D (depending on the state's criteria for pass/fail). (NOTE: if your school does not use SCED codes, you would need to count the number of laboratory science courses the student completed using **Course Identifier** and **Course Section Identifier**.) This count should also include courses that are split over two semesters which is determined by using **Session Type** = Semester). The list of courses must include at least four of the following:

- Biology where SCED Code = 03051
- Physics where SCED Code = 03151

- Chemistry where SCED Code = 03101

## SOCIAL SCIENCES

From the graduates who successfully completed four years of English and Math and three years of laboratory science, pull the students who successfully completed two years of social sciences:

- Pull all courses where ***School Courses for the Exchange of Data Course Subject Area*** - 04 (Social Sciences and History), ***School Courses for the Exchange of Data Sequence of Course*** is = 2, ***Student Course Section Grade Earned*** is not null, and
- ***Grade Value Qualifier*** = A, B, C or D (depending on the state's criteria for pass/fail). (NOTE: if your school does not use SCED codes, you would need to count the number of English courses the student completed using ***Course Identifier*** and ***Course Section Identifier***.) This count should also include courses that are split over two semesters which is determined by using ***Session Type*** = Semester.

## FOREIGN LANGUAGE

From the graduates who successfully completed four years of English and Math and three years of laboratory science, and two years of social sciences, pull the students who successfully completed two years of foreign language courses:

- Pull all courses where ***School Courses for the Exchange of Data Course Subject Area*** - 24 (World Languages), ***School Courses for the Exchange of Data Sequence of Course*** is = 2, ***Student Course Section Grade Earned*** is not null, and
- ***Grade Value Qualifier*** = A, B, C or D (depending on the state's criteria for pass/fail). (NOTE: if your school does not use SCED codes, you would need to count the number of English courses the student completed using ***Course Identifier*** and ***Course Section Identifier***.) This count should also include courses that are split over two semesters which is determined by using ***Session Type*** = Semester.

## VISUAL OR PERFORMING ARTS

From the graduates who successfully completed four years of English and Math and three years of laboratory science, and two years of social sciences and foreign language, pull the students who successfully completed two years of visual or performing arts:

- Pull all courses where ***School Courses for the Exchange of Data Course Subject Area*** - 05 (Visual and Performing Arts), ***School Courses for the Exchange of Data Sequence of Course*** = 1, ***Student Course Section Grade Earned*** is not null, and
- ***Grade Value Qualifier*** = A, B, C or D (depending on the state's criteria for pass/fail). (NOTE: if your school does not use SCED codes, you would need to count the number of English courses the student completed using ***Course Identifier*** and ***Course Section Identifier***.) This count should also include courses that are split over two semesters which is determined by using ***Session Type*** = Semester.

To calculate the percentage of high school graduates who successfully complete the coursework required for admission to a four-year college or university:

- Count the number of high school graduates who successfully completed four years of English and Math, three years of laboratory science, two years of social sciences and foreign language, and one year of visual or performing arts.
- Count the number of high school graduates.
- Divide the total number of high school graduates who successfully completed the identified courses by the total number of high school graduates and multiply by 100.

## Disaggregate by Home Language

Use the following CEDS elements to disaggregate the final set of students by Home Language:

- ***Language Type*** = Home Language; and
- ***ISO 639-3 Language Code*** ≠ Eng; and/or
- ***English Learner Status*** = Yes

## Disaggregate by Homelessness

Use the following CEDS elements to disaggregate the final set of students by Homelessness:

- ***Homelessness Status*** = Yes
- ***Homeless Serviced Indicator*** = Yes
- ***Status Start Date*** ≤ the school year being reported
- ***Status End Date*** ≥ the school year being reported

## Disaggregate by Race and Ethnicity

Use the following CEDS elements to disaggregate the final set of students by Race:

Filter records where ***Hispanic or Latino Ethnicity*** = No

Count, by race, where any of the following are true:

- ***Race*** = American Indian or Alaska Native
- ***Race*** = Asian
- ***Race*** = Black or African American
- ***Race*** = Native Hawaiian or Other Pacific Islander
- ***Race*** = White
- ***Race*** = Demographic Race Two or More Races
- ***Race*** = Race and Ethnicity Unknown

Use the following CEDS elements to disaggregate the final set of students by Hispanic or Latino Ethnicity:

- Filter records where ***Hispanic or Latino Ethnicity*** = Yes

## Disaggregate by Sex

*\*Note: CEDS does not have a Gender element. While Sex is not a proxy for Gender it is the closest approximation currently available.*

*\*Note: Male + Female will not always equal 100% for states that have more choices beyond male and female.*

Use the following CEDS elements to disaggregate the final set of students by Sex:

- ***Sex*** = Male, Female, or Not Selected

## Disaggregate by Disability Status

Use the following CEDS elements to disaggregate the final set of students by Disability Status:

### Students with a Disability

- ***Disability Status*** = Yes; and/or
- ***Status Start Date*** ≤ the school year being reported
- ***Status End Date*** ≥ the school year being reported
- ***IDEA Indicator*** = Yes; and/or
- ***Section 504 Status*** = Yes

Count, by disability type, where any of the following are true:

- ***IDEA Disability Type*** = Autism
- ***IDEA Disability Type*** = Deaf-blindness
- ***IDEA Disability Type*** = Deafness
- ***IDEA Disability Type*** = Developmental delay
- ***IDEA Disability Type*** = Emotional disturbance
- ***IDEA Disability Type*** = Hearing impairment
- ***IDEA Disability Type*** = Intellectual disability
- ***IDEA Disability Type*** = Multiple disabilities
- ***IDEA Disability Type*** = Orthopedic impairment
- ***IDEA Disability Type*** = Other health impairment
- ***IDEA Disability Type*** = Specific learning disability
- ***IDEA Disability Type*** = Traumatic brain injury
- ***IDEA Disability Type*** = Visual impairment

Filter records based on ***Primary Disability Type*** when ***IDEA Indicator*** = Yes

- ***Program Participation Start Date*** ≤ the school year being reported
- ***Program Participation Exit Date*** ≥ the school year being reported

- Students without a Disability
- **Disability Status** = No; and
  - **Primary Disability Type** is null; and
  - **IDEA Indicator** = No; and
  - **Section 504 Status** = No
- Count the number of students with a disability and the number of students without a disability.

**Disaggregate by Urbanicity**

- Use the following CEDS element to disaggregate the final set of students by Urbanicity.
- **Rural Residency Status** = Yes (indicating Rural) or No (indicating Urban)

**Disaggregate by Parental Education Level**

- Use the following CEDS element to disaggregate the final set of students by Parental Education Level:
- **Highest Level of Education Completed** = Determine what the highest level of education completed is for the parents/guardians of the student

**Disaggregate by Migrant Family Household**

- Use the following CEDS elements to disaggregate the final set of students by Migrant Family Household:
- **Migrant Status** = Yes, No
  - **Program Participation Start Date** ≤ the school year being reported
  - **Program Participation Exit Date** ≥ the school year being reported

**Disaggregate by English Learner**

- Use the following CEDS elements to disaggregate the final set of students by English Learner:
- **English Learner Status** = Yes, No
  - **Program Participation Start Date** ≤ the school year being reported
  - **Program Participation Exit Date** ≥ the school year being reported

**Disaggregate by K12 School Type**

- Use the following CEDS elements to disaggregate the final set of students by K12 School Type:
- **Charter School Type** = School Charter or College University or NA; and
  - **School Type** = Regular, Special, Career and Technical, Alternative or Reportable
  - **Administrative Funding Control** = Public School, Private School, or Other
  - **Organization Type**= K12 School, Education Institution

**Disaggregate by Age Group**

- Use the following CEDS element to disaggregate the final set of students by Age Group:
- **Birthdate** = Age as of October 1 of the school year being reported

**Disaggregate by Individuals or Family Military Status**

- Use the following CEDS elements to disaggregate the final set of students by Individuals or Family Military Status:
- **Military Connected Student Indicator** = Not Military, Active Duty, National Guard or Reserve, or Unknown

**Disaggregate by Individual with Current or Past Child Welfare Involvement**

- Use the following CEDS elements to disaggregate the final set of students by Individual with Current or Past Child Welfare Involvement:
- **Program Type** = 75000 (Foster Care)
  - **Student Support Service Type** = 00295 (Children’s protective services)
  - **Program Participation Start Date** ≤ the school year being reported
  - **Program Participation Exit Date** ≥ the school year being reported

**Disaggregate by Justice Involvement**

- Use the following CEDS elements to disaggregate the final set of students by Justice Involvement:
- **Disciplinary Action Taken** = Juvenile Justice Referral, Law enforcement referral, or Placed in juvenile detention center
  - **Disciplinary Action Start Date** ≤ the school year being reported
  - **Disciplinary Action End Date** ≥ the school year being reported

► **Related Connections**

No related connections

► **Related References**

A. Title: Education-to-Workforce Indicator Framework; Source: Education-to-Workforce Indicator Framework (see <https://educationtoworkforce.org/>)

**Author’s Comments/Additional Information**

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