

Dual Enrollment

History, Current State, and What's Next

The Bill & Melinda Gates Foundation's pathways strategy aims to improve education systems to support students in the **transitions from high school to college, career, and beyond.**

In particular, the strategy is focused on **increasing the number of Black and Latino students and students from low-income backgrounds who obtain credentials of value and gain the professional skills, agency, and social capital to thrive in the workplace.**

The Pathways team sees dual enrollment as a one of the most promising ways to deliver on that goal.

What is this deck?

This deck was created to synthesize what the team is learning through many investments and partnerships.

Our partners include:



How might this deck be used?

- To learn about dual enrollment
- To share the history and potential of dual enrollment
- To make the case for putting attention and resources behind dual enrollment
- To inform a context-specific presentation or discussion about dual enrollment

What is dual enrollment?

In the broadest sense, dual enrollment is when **high school students take college courses.**

High schools and colleges partner to offer this to students. Approaches vary, with significant differences in the structure and extent of course offerings, student supports, and mode of learning. For example:

- Students may take courses at their high school, at the partnering college campus, or online
- Courses may be taught by qualified high school instructors or college faculty, and include both general education and technical workforce courses

Also known as dual credit, concurrent enrollment, tech prep



Students learning at Lorain County Community College in Elyria, OH, on August 31, 2023.

Our hypothesis is that the highest-impact dual enrollment programs:

Help students earn a minimum of **12 transferrable, credit-based courses**



Are structured around **a program of study** that articulates to credentials and leads to career opportunities



Are **aligned** with a career path of student interest



Have early **advising**, goal setting, and planning supports



Are offered at **no cost** to students



This hypothesis is based on evidence from our partners and the broader field. Research continues to emerge and inform our thinking.

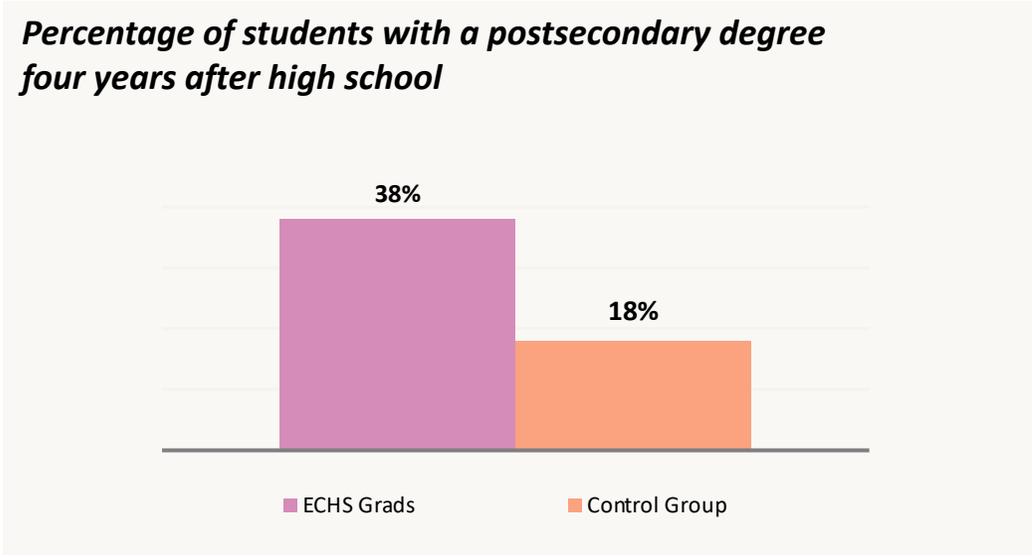
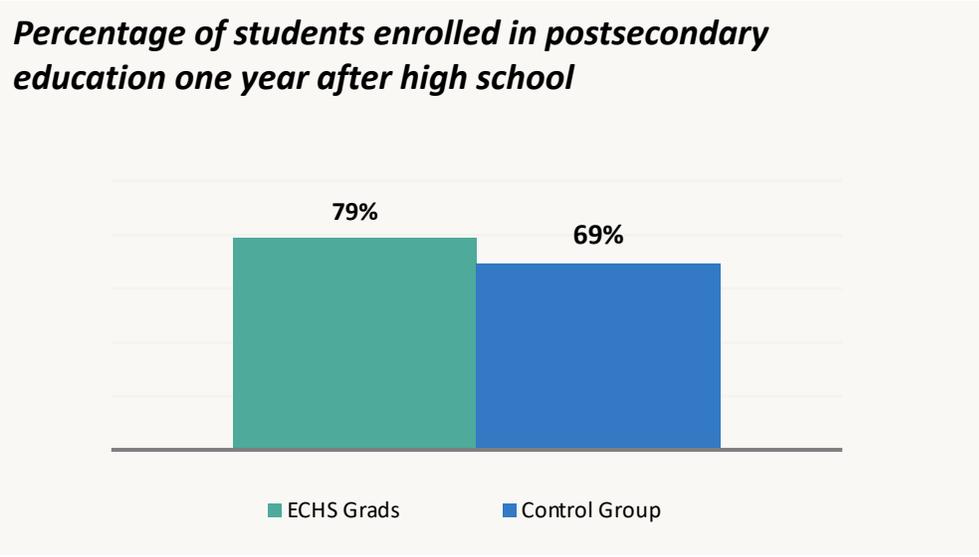
(L-R) (1) Students work in an English class taught by Kiran Lodhie at Everest Public High School in Redwood City, CA. The school is part of the Summit group of schools in the area. May 27, 2014. (2) Students learning at Lorain County Community College in Elyria, OH, on August 31, 2023. (3) Khajia Faulk works with other students enrolled in the School of Nursing program at Chamberlain University in New Orleans, Louisiana, on July 11, 2023. (4) Students in the High Tech High Program at the Chula Vista Middle School meet with Bill Gates, co-chair of the Bill and Melinda Gates Foundation, at Chula Vista Middle School in Chula Vista, CA on April 18, 2023. (5) Students at Evergreen Campus of Health Sciences & Human Services High School (HS3) in Seattle, WA on May 20, 2014.

Dual enrollment has existed in various forms for over 40 years

Historically, dual enrollment focused on creating opportunities for enhanced academic preparation for college-bound, higher performing students, but models like Early College High School have helped to greatly broaden access.

In the 2000s, the Early College High School (ECHS) initiative (supported by the Gates Foundation) created approximately 300 new schools that combined dual enrollment and intensive supports to help low-income students and students of color earn an associate degree by graduation.

Positive impacts of ECHS on these target populations have been rigorously studied:



Despite strong results, the significant effort and costs associated with ECHS have limited its expansion.

Source: Song, M., Zeiser, K.L. (2019) Early college continued success: Longer-term impact of early college high schools. American Institutes for Research. <https://files.eric.ed.gov/fulltext/ED602451.pdf>

Scaling positive impacts

Dual enrollment programs have the potential to deliver similar positive impacts, when implemented with care, rigor, and a focus on long-term student outcomes.

There is good evidence that high quality dual enrollment has a positive impact on:

- Completing high school
- Enrolling in college
- Completing college degrees

This is true for all dual enrollment students, including:

Students of color, who enroll in college at higher rates¹

+9.8pp Black students
+8.6pp Hispanic students

Low-income students, who attain bachelor's degrees at

7.6% higher rates²

Academically struggling students, who enroll in college at

20% higher rates³

Sources: 1. Liu, V. Y. T., Minaya, V., Zhang, Q., & Xu, D. (2020). High school dual enrollment in Florida: Effects on college outcomes by race/ethnicity and course modality. Community College Research Center. Retrieved from <https://ccrc.tc.columbia.edu/media/k2/attachments/dual-enrollment-florida-race-ethnicity-course-modality.pdf> 2. Blankenberger B., Lichtenberger E., Witt M. A., Franklin D. (2017). Diverse students, high school factors, and completion agenda goals: An analysis of the Illinois class of 2003. *Education and Urban Society* 49(5), 518–545. <https://journals.sagepub.com/doi/10.1177/0013124516644047> 3. Lee & Villarreal, 2022 https://uei.utsa.edu/files/pdfs/DualCredit_March2022.pdf

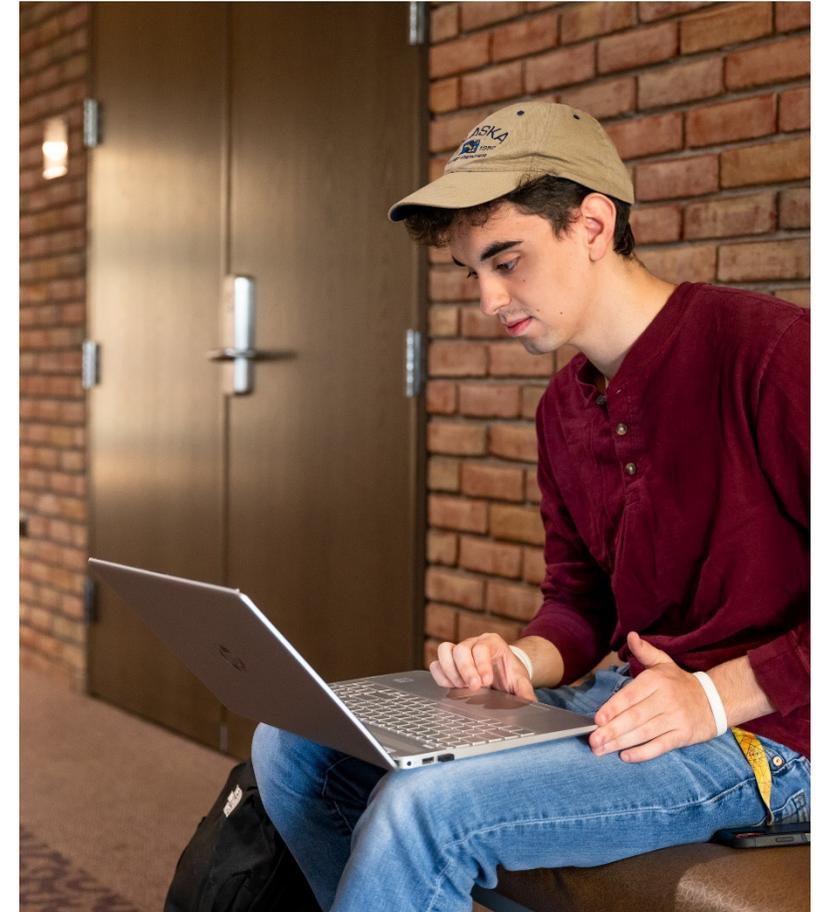
Dual enrollment is growing rapidly

There were 1.5 million dual enrollment students in 2021 — three times more than there were in 2001.

- 70% of dual enrollment courses are offered by community colleges
- In the fall of 2021, 1 in 5 community college enrollees were high school students
- 4 out of 5 public schools in the U.S. now offer dual enrollment courses

State funding has increased but access- and success-oriented policies have not kept pace.

- Too few programs intentionally align dual enrollment course sequences with postsecondary programs of study in high-demand, high-wage fields
- Students who are white and whose families have higher incomes are more likely than their Black, Latino and low-income peers to take dual enrollment courses
- Eligibility barriers (e.g., test scores, grades, teacher recommendations) can prevent capable students from participating



Student Austin White works on class assignments at Lorain County Community College in Elyria, OH, on August 30, 2023.

Sources: Community College Research Center, [What Happened to Community College Enrollment During the First Years of the Pandemic? It Depends on the Students' Age](#). Community College Research Center, [High School to College](#).

What could dual enrollment look like in the future?

For an expansion of dual enrollment **to equitably and effectively increase credential attainment for all students**, leaders will need to:

- Understand how the number of dual enrollment courses taken impacts students' momentum toward college success
- Align dual enrollment courses to postsecondary programs of study
- Increase access for traditionally underserved students
- Deliver high-quality advising and academic supports



Students learning at Lorain County Community College in Elyria, OH, on August 31, 2023.

This will require a fundamental shift in the structure and focus of dual enrollment:

FROM

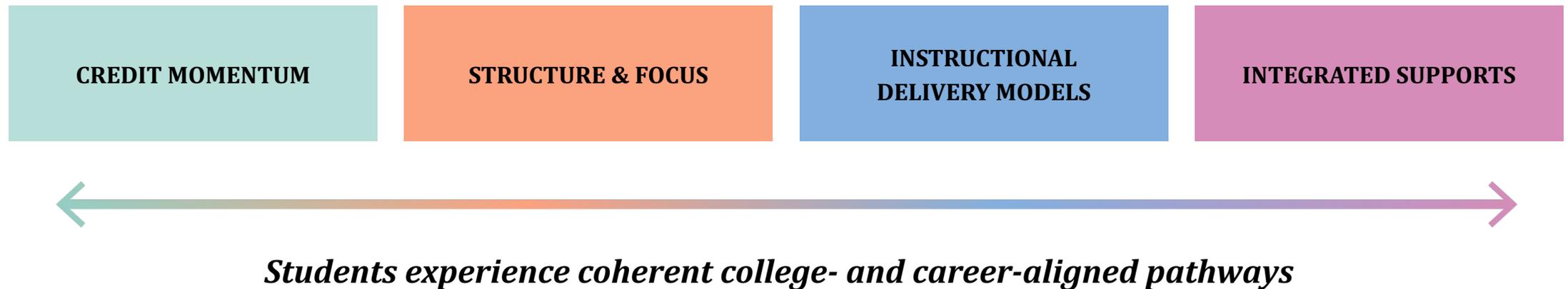
“Random acts of dual enrollment”
A “program of privilege” that offers mostly introductory courses to a subset of students who are already likely to enroll in college

TO

“Purposeful pathways” aligned to valuable credentials
High-quality college courses, with advising and support, available to all students at no cost

Source: [Community College Research Center](#).

What are the **levers** to maximize the impact and value of dual enrollment?



Credit Momentum

There were 1.5 million dual enrollment students in 2021.

During high school, they took anywhere from just 1–2 courses to 60 credit hours, the equivalent of two years of college or an associate degree.

Any amount of dual enrollment can:

- Expose students to college-level work
- Help students develop a college-going mindset
- Reduce the cost and time required to earn a credential

Credit momentum refers to the research-backed idea that increasing the number of dual enrollment credits a student takes **raises their likelihood of:**

- **enrolling in college¹**
- **persisting²**
- **and obtaining a degree³⁴**

But there is not yet definitive evidence on where positive impacts plateau.

Taking more courses can also:

- Allow for a more coherent, structured set of courses that articulate to a program of study
- Require students to start earlier (in grade 9 or 10)

Sources: 1. Ferrari, T. N. (2017). The duality of dual enrollment: How the relationship between student demographics, academic metrics, and college [Doctoral dissertation, College of William & Mary in Virginia] 2. Delicath, T. A. (1999). The influence of dual credit programs on college students' integration and goal attainment. *Journal of College Student Retention*, 1(4), 377–398. <https://doi.org/10.2190/1YUD-Y451-6YED-81XN>. 3. Gian, M. S., Alexander, C., & Reyes, P. (2014). Exploring the variation in the impact of dual-credit coursework on postsecondary outcomes: A quasi-experimental analysis of Texas students. *The High School Journal*, 97(4), 200-218. <https://doi.org/10.1353/hsj.2014.0007>. 4. Garbee, K. T. (2015). College credit in high school: An examination of the impact of dual credit on college success and completion in Texas [Doctoral dissertation, University of Texas at Austin].

Structure and Focus

FROM “Random acts of dual enrollment” that don’t articulate to a credential  **TO** **Coherent, well-structured paths** aligned to associate degrees, industry certifications, and transferable credits including general and technical education courses

Structured paths that are relevant to students' aspirations have positive impacts on:

- High school graduation
- Transition to college
- Labor market outcomes

Structured paths can:

- Demonstrate coursework relevance to potential careers, which may increase student motivation
- Set students on a path that saves money and time towards a college credential, which is attractive to both students and families

This shift requires:

- Intentional alignment of systems, structures, and policies across K–12 and higher education, including the transferability of credits to postsecondary institutions
- Institutional leaders to understand the labor market in their region/state and engage with employers to offer a relevant set of courses aligned to high-wage, high-demand jobs
- School schedules that allow students to take the structured offerings and meet high school graduation requirements
- High-quality coursework and teaching that can activate students' motivation to continue with higher ed after high school

Example

When North Carolina’s CTE dual enrollment program offered a structured set of courses aligned to careers, participating students were more likely to graduate high school (2+ percentage points) and more likely to enroll in college (9+ percentage points) than their peers.

Source: [The Evaluation of Career and College Promise](#).

Instructional Delivery Models

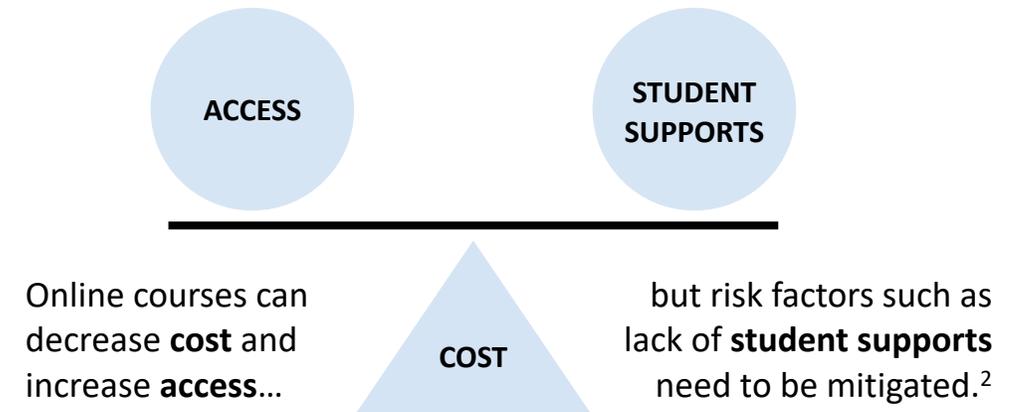
Instructional delivery models for high school dual enrollment courses include:

- On the college campus, taught by college faculty
- On the high school campus, taught by college faculty
- On the high school campus, taught by certified/qualified high school teachers

Across the three delivery models, instruction may be provided in-person, online, or a hybrid of both.

Some studies have found one model yields better results; other studies have found otherwise.¹

Given that the evidence is mixed, consider these three key components:



Sources: 1. D'Amico, M. M., Morgan, G. B., Robertson, S., & Rivers, H. E. (2013). Dual enrollment variables and college student persistence. *Community College Journal of Research and Practice*, 37(10), 769–779. <https://doi.org/10.1080/10668921003723334>
2. Community College Research Center: "Dually Noted: Understanding the Link Between Dual Enrollment Course Characteristics and Students' Course and College Enrollment Outcomes."

Integrated Supports

Too often, students receive limited guidance on how to plan their dual enrollment path — or even why and how to take part in dual enrollment.

Ideally, students receive guidance via courses or advisors that help them **explore potential pathways, understand which courses align to their goals and which courses count toward a degree or credential**, and weigh dual enrollment courses against their current schedule and workload.

Advising and support should come from the high school and the college, with each institution contributing to students' holistic plans.

One of the components of the Community College Research Center's DEEP framework is expanded **outreach** that prioritizes connecting with underserved communities.

CCRC's research shows that dual enrollment programs that maximize participation:

- Focus outreach on underserved high schools, students, and communities
- Start outreach before high school
- Build and leverage community connections to increase awareness
- Build trust with and educate parents and families
- Use high school grades as an alternative to placement testing for eligibility

It's also important to:

- Use data to ensure that Black, Latino, and female students and students from low-income backgrounds are not tracked into programs of study that lead to lower-paying occupations
- Help students make purposeful choices as early as middle school —this could be done through a college and career planning course, delivered during the school day

What does high-quality, equitable dual enrollment look like?

An emerging approach



LOCAL IMPLEMENTATION ACTIONS

<p>Set and communicate participation goals across leadership at the school, district and college level</p>	<p>Remove eligibility barriers that prevent some students from participating</p>	<p>Build school cultures where students of all backgrounds see college acceleration as a viable and attractive option</p>	<p>Provide advising supports to plan and track each student’s progress towards their pathway goals</p>	<p>Align instructional expectations across high school teachers, college faculty, and students to ensure rigorous instruction and student success</p>	<p>Organize cross-institution teams with joint accountability to solve problems and share data for continuous improvement</p>
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STATE POLICY ACTIONS

<p>Set and report on public goals for participation and success for underserved students</p>	<p>Drive cross-sector collaboration between K–12 and higher ed</p>	<p>Ensure credits count toward high school graduation and college credentials</p>	<p>Mandate minimum dual enrollment course availability regardless of geography</p>	<p>Develop pool of qualified teachers to teach dual-enrollment classes</p>	<p>Require adequate advising supports to help students choose and persist on a pathway</p>	<p>Provide funding for tuition, fees, and materials to ensure all students can participate at no cost</p>
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Concepts drawn from Education Commission of the States, CCRC

How to expand dual enrollment to equitably and effectively increase college enrollment and persistence?

A working hypothesis

Dual enrollment can **expand the pool of students who attain college credentials and be delivered affordably at scale** when it:

Continued on the following page with:

Tailwinds

Headwinds

Is organized as a **building block within high school schedules** to give students options for completing an associate degree by year 12, 13, or 14.

**CREDIT
MOMENTUM**

Combines a well-structured pathway with **advising and planning supports** that build motivation and remove barriers to participation and persistence.

**STRUCTURE
& FOCUS**

**INTEGRATED
SUPPORTS**

Maximizes state funding and prioritizes **affordable delivery models** including hybrid/online and high school-based delivery.

**INSTRUCTIONAL
DELIVERY MODELS**

Exists within a **comprehensive suite of state policies and implementation practices that increase equity in access** and student success at scale.

**LOCAL
IMPLEMENTATION
ACTIONS**

**STATE
POLICY ACTIONS**

Tailwinds and headwinds

A working hypothesis, cont.

Tailwinds

- Guided Pathways implementation at hundreds of community colleges provides a framework for well-articulated dual enrollment programs
- Many states are expanding funding and removing eligibility barriers (AZ, CA, CO, FL, LA, TX, UT)
- Shared sector knowledge base emerging from twenty years of ECHS on how to support traditionally underserved students
- Increasing availability of digital course delivery options post-pandemic

The goal:
Dual enrollment delivered **affordably at scale** as a tool to **expand the pool of students who attain college credentials.**

Headwinds

- Lack of consistent data collection, disaggregation, and analysis and lack of data sharing within and across states
- Lack of rigorous evidence and research on student outcomes
- Systematic lack of funding/policy for embedded advising
- Limited pool of certified and trained high school teachers to offer courses at high schools

What's next?

There is strong evidence that dual enrollment is a powerful tool to accelerate students—including students who may not see themselves going to college—toward a postsecondary credential and a career.

Additional research is needed to answer key questions and gather proof points on the impact of career-aligned dual enrollment pathways on postsecondary enrollment and completion.

Read more and access resources for implementation on the [Pathways website](#).

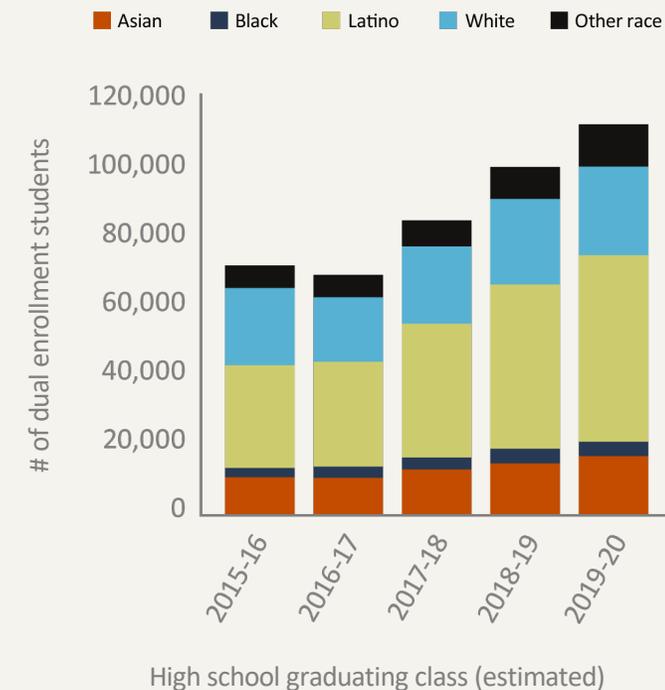
Implementation Case Studies

Case Study: California's intentional expansion of dual enrollment pathways



Demographics, growth of CA dual enrollment

Number of Students by Subgroup: PPIC, Oct 2021



Key Catalysts of Equitable Growth

- **Widespread Guided Pathways implementation** at California community colleges since 2015 has led to the creation of more structured pathways to associate degrees. This approach to reform is a strong influence on the creation and expansion of more structured dual enrollment pathways.
- **In 2016, College and Career Pathways Partnership Act (CCAP) drove significant growth in Dual Enrollment course taking.** It put an emphasis on “students who may not already be college bound or who are underrepresented in higher education, with the goal of developing seamless pathways from high school to community college for career technical education or preparation for transfer.” To increase equitable access, the act enabled colleges to offer courses exclusively to high school students, often on high school campuses at no cost for students. Also, as community college students in California, they cannot be excluded from courses based on GPA or testing requirements, which removes one additional barrier.
- **In 2023, the Legislature passed \$700M in new funding: Golden State Pathways (\$500M) and Dual Enrollment Expansion (\$200M).** This requires an integrated program of study, at least 12 postsecondary credits, and work-based learning.

Ongoing Challenges

- **Inequitable 2019 participation rates:** 26% of Asian students, 22% of White students vs. 16% of Black and Latino students participated in dual enrollment¹
- **Lack of qualified high school instructors** and high training costs
- **Limited access to longitudinal data** to support program improvement
- 10% of dual enrollment course credits are **non-transferable to associate and bachelor's degrees**

Sources: Chart from Public Policy Institute of California - Policy Brief: Dual Enrollment in California. Olga Rodriguez, Niu Gao, and Mary Severance. <https://www.ppic.org/publication/policy-brief-dual-enrollment-in-california/>. 1. UC Davis - A Foot in the Door Growth in Participation and Equity in Dual Enrollment in California. Michal Kurlaender, Sherrie Reed, Michel Grosz, Joanna Mathias and Katherine Hughes. https://education.ucdavis.edu/sites/main/files/wheelhouse_research_brief_vol_6_no_7_final.pdf

Case Study: Bakersfield College, Central Valley

**BAKERSFIELD
COLLEGE**



The college works with surrounding districts and charter schools to offer dual enrollment pathways made up of transferable credit-bearing courses, accessible to all students.

Key Facts

- Dual enrollment has grown from 811 students in Spring 2016 to 8,180 students in Spring 2022 (33% of college population) through partnerships with 38 high schools
- DE student demographics: 73.1% Hispanic; 14.5% White; 61.7% female
- 88% of dual enrollment students earned a grade >70% (C or better)
- Colleges experience meaningful retention of students with DE credits (except for those who are close to or complete an associate degree)

Pathways and Levels of Implementation

Bakersfield has implemented eight associate degree pathways and five certificate degree pathways. Each allows students to complete entire certificate and/or degrees while in high school. There are varied levels of implementation across the district:

Level 1: Exploration

5 High Schools + Homeschool Students

Students can take college courses on the high school campus.

Level 2: Installation

29 High Schools

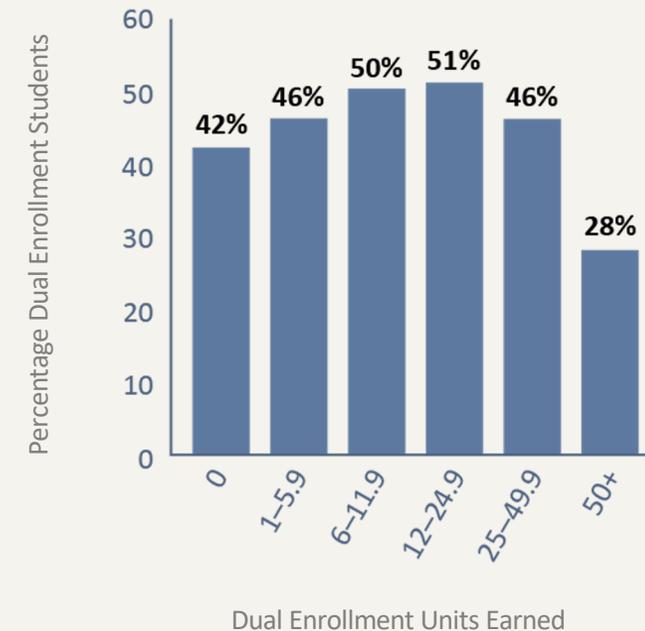
Students can complete a college degree or certificate on the high school campus.

Level 3: Implementation

4 High Schools

All incoming ninth-grade students are on a pathway to earn between 9 and 60 units toward a college degree and/or certificate.

Percent of students who enroll in a Kern Community College* immediately post high school graduation



Source: <https://careerladdersproject.org/report/where-are-they-now/>

Source: Career Ladders Project: "Where Are They Now: A Study of Dual Enrollment Students in the Kern Community College District."

*Bakersfield College represents ~77% of enrollments within Kern College district

Case Study: Bakersfield College partner McFarland High School offers “wall-to-wall” dual enrollment pathways model to all students



McFarland High School Key Facts

968 total students

- 90% economically disadvantaged (*eligible for free/reduced lunch or other public assistance*)
- 22% ELL
- 97.7% Hispanic
- 8.7% homeless
- **71% of students enrolled in college courses (2021–22)**

All incoming 9th grade students get on pathway to complete between 12 and 60 credits toward a Career and Technical Education Certificate, General Education Transfer Certificate, and/or associate degree by the time they graduate from high school.

9th Grade

All students take introductory career and life planning course in which they select a pathway and create a 10-year education, career, and life plan.

10–12th Grade

Students choose one of:

- General Education Certificates Pathway (*30 units*)
- Agriculture Business Management Pathway (*12 units*)
- Education Pathway (*12 units*)
- Photography Pathway (*12 units*)
- Industrial Technology: Welding Pathway (*14 units*)
- Business Pathway (*17 units*)
- Public Health Pathway (*21 units*)
- Spanish Associate Degree for Transfer Pathway (*60 units*)

Pathways Examples: Courses include mix of high school and campus-based options

General Education Transfer Certificate *30 credits*

9th Grade

- STDV Career & Life Planning Course (*6 units*)

10th Grade

- Oral Communication
- Intro to Psychology (*6 units*)

11th Grade

- Spanish
- History (*6 units*)

12th Grade

- English Composition I/II
- Political Science
- Math (*12 units*)

Degree/Cert Pathway

- Transfer to a CSU as a sophomore or complete an associate degree within one year

Agricultural Business Management *12 credits*

9th Grade

- STDV Career & Life Planning (*3 units*)

10th Grade

- Agriculture, Environment and Society (*3 units*)

11th Grade

- Agricultural Sales & Communication (*3 units*)

12th Grade

- Intro to Agribusiness (*3 units*)

Degree/Cert Pathway

- AS, Agricultural Business (degree for transfer)
- Agricultural Business Management Certificate

Public Health *21 credits*

9th Grade

- STDV Career & Life Planning (*3 units*)

10th Grade

- Intro to Public Health
- Contemporary Health Concerns (*6 units*)

11th Grade

- Drugs, Health & Society
- Social Justice & Health (*6 units*)

12th Grade

- Health Communications
- Intro to US Healthcare System
- Health Education Promotion Strategies
- Lifespan Dev. (*6 units*)

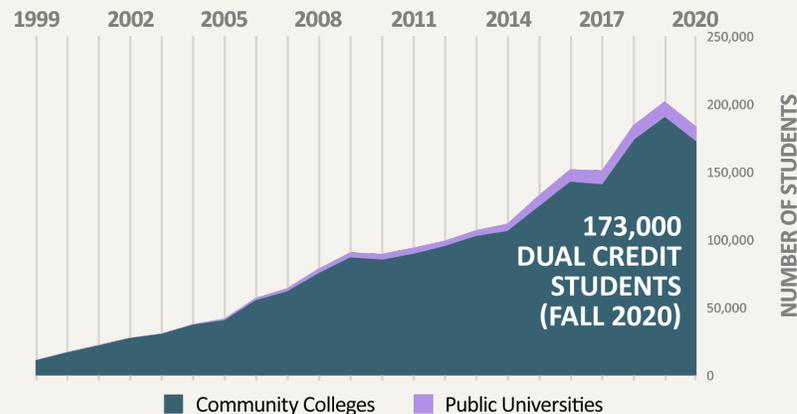
Degree/Cert Pathway

- AS, Public Health (degree for transfer)
- Health Navigator Certificate (by HS graduation)

Case Study: Building on history of early college and fueled by state support, Texas is poised for significant dual enrollment expansion



Growth of dual enrollment in Texas



Key facts:

- **25% of courses are delivered online in TX**, facilitated by statewide UT OnRamps course platform which offers 17 standard dual enrollment courses for credit and enrolls 41,000 students
- **Students must pass the TSIA test to be eligible for academic dual enrollment courses**, preventing 40% of students from participating overall, and 55% of African American and 47% of Hispanic students
- Of those participating in dual enrollment, **60% of students completed >9 credit hours** and **75% immediately enrolled in college** post high school graduation, but the enrollment figure does not account for prior achievement given lack of data

Source: CCRC presentation at the Leading Talent Strong Texas Pathways conference, April 2023.
https://drive.google.com/file/d/1xF_8PH0vfdDDyJBw_izHJsvOeDv7Bf1g/view

Key Catalyst for Equitable Dual Enrollment Pathways

Historically, dual enrollment has only been free to students attending Early College and P-TECH high schools, which represent just 16% of all Texas high schools. For those not attending ECHS or P-TECH, community colleges offer dual enrollment courses to surrounding districts.

Some school districts pay negotiated tuition rates—in others, students bear all of the cost. Despite the significant inequities this has resulted in, overall participation in dual enrollment has expanded dramatically, and enrollment is increasingly reflective of TX demographics. In 2021 statewide dual enrollment students were 27% white, 53% Hispanic, and 13% Black. (These statewide rates do mask significant regional inequities.)

HB8 Community College Finance Reform Act (2023)

Passed unanimously, this potentially transformative legislation incentivizes pathways and structured dual enrollment.

- Early calculations estimate an extra \$305 million in funding for FY 2024, and in general, more equitable funding across Texas community colleges
- State will pay for up to 15 credits for low-income dual enrollment students and include performance funding for dual enrollment students who complete a 15-credit hour sequence aligned to academic and workforce program requirements
- This will allow school districts to partner with community colleges to expand Career Academies (widespread in Title I high schools) into dual enrollment pathways aligned with Guided Pathways programs

Source: Community College Research Center: "[Leading to Scale Dual Credit Pathways: Data DEEP Dive.](#)"

Case Study: Lee College

The college and Goose Creek ISD are partnering to offer pathways to associate degrees that combine AP and dual enrollment courses.



Key Facts

- Lee College, in Baytown, Texas (east of Houston) in Fall 2021 enrolled 7,790 total students, including 2,808 dual enrollment students from 14 high schools
- Goose Creek Memorial High School enrolls 2,154 students; 59.7% Hispanic, 18.2% Black, low income 63.6%
- Students pay \$50 annual fee to participate, school district pays remaining tuition/fees/books (per agreement between high school and college)

Dual Enrollment Pathways Approach

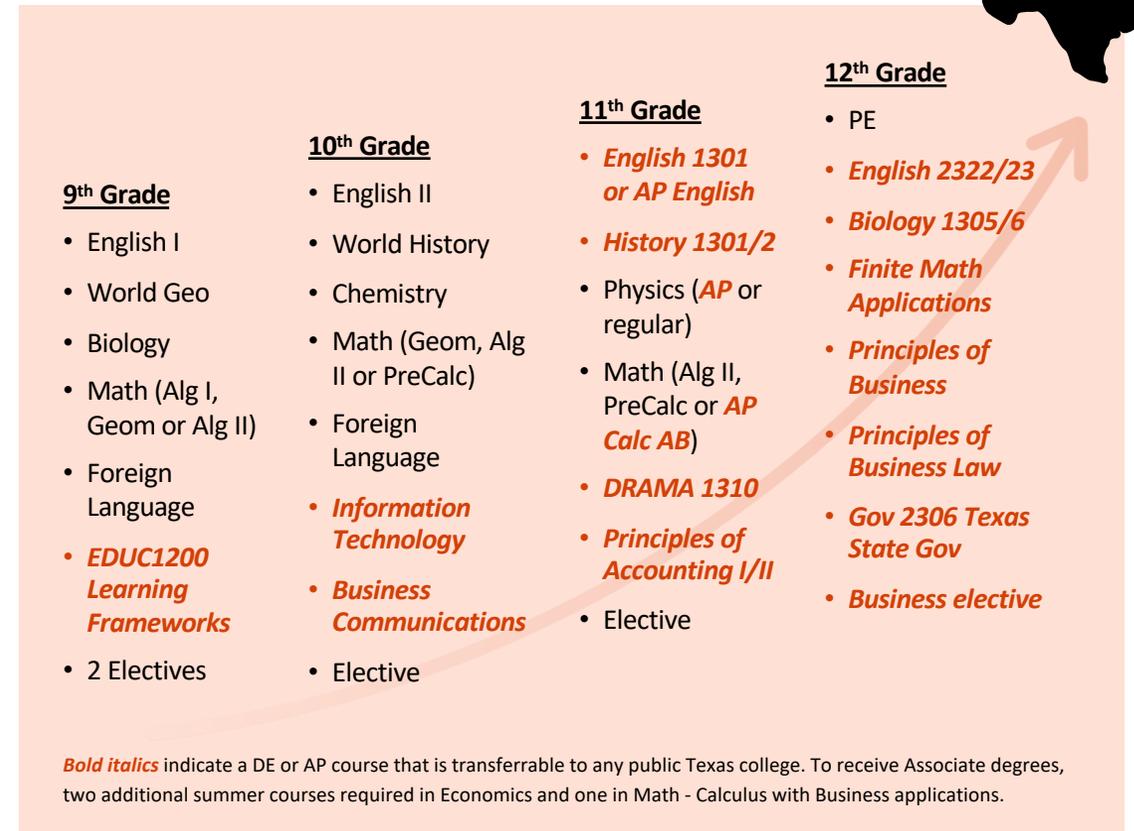
Students are encouraged to take a mix of AP classes, Lee College courses on the high school or college campus, and UT OnRamps online that fit best with the career path and college degree plan they have chosen:

- 87% of DE classes at high school, 14% online
- 38% of students took dual credit and AP courses, including 42% of Hispanic and 32% of Black students (3/4 of which were DE, 1/4 AP)
- EDUC 1200 — Learning Frameworks Course required for students in 9th grade

Dual enrollment courses are embedded into career academies, which are organized around a career theme such as health sciences or information technology.

- Career academies are in 8,000 high schools but often do not embed dual enrollment courses or connect to a college program of study
- Embedding dual enrollment foundation courses and college advising in high school career academies can motivate and prepare students for a college pathway

Pathways Examples: Global Business Academy Associate of Business: 42–60 credit hours completed, transferable to any public Texas college



BILL & MELINDA
GATES *foundation*

gatesfoundation.org
usprogram.gatesfoundation.org