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Virginia's Community Colleges and the Changing Higher Education Landscape

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COMMISSION DRAFT

JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

JLARC staff for this report
Justin C. Brown, Senior Associate Director
Stefanie Papps, Chief Legislative Analyst, Project Leader
Kate Agnelli, Senior Legislative Analyst
Ellen Miller, Chief Economic Development and Quantitative Analyst
Mitchell Parry, Senior Associate Legislative Analyst

Jessica Sabbath, Managing Editor

Information graphics: Nathan Skreslet

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WHAT WE FOUND

Proportion of students taking courses online has increased substantially

Students' expectations about course delivery have changed, with students increasingly desiring online and on-demand (i.e., asynchronous) courses. In response, Virginia community colleges are embracing online education. The proportion of students taking all their courses online increased from 17 percent in 2015–16 to 41 percent in 2024–25. At the same time, the proportion of students taking all their courses in-person has declined from 39 percent to 11 percent. A substantial portion of students take a mix of in-person and online courses, and that proportion has grown slightly (4 percentage points) over the last decade (figure).

WHY WE DID THIS STUDY

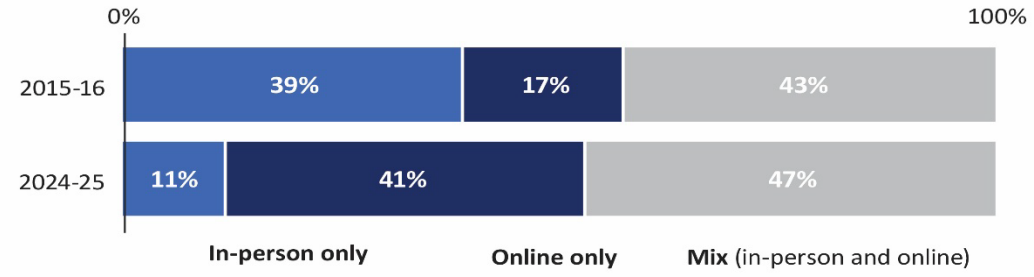
In 2024, the Joint Legislative Audit and Review Commission (JLARC) directed staff to review how well the state's community colleges are adapting to the changing higher education landscape.

ABOUT VIRGINIA'S COMMUNITY COLLEGES

Virginia's Community College System consists of 23 individual colleges, a system office, and a board. More than 235,000 students were enrolled at some point during the 2024–25 academic year. Enrollment has declined over the last 10 years but stabilized and rebounded over the last three years, largely because of the growing number of dual enrollment students.

The shift to online learning has occurred with both asynchronous and synchronous courses. In 2024–25, 63 percent of Virginia Community College System (VCCS) students were taking at least one course asynchronously, a 22 percentage point increase over the past decade. Just 1 percent of VCCS students took any synchronous courses in 2015–16, but 25 percent of VCCS students did so in 2024–25.

Larger proportion of students taking all courses online



SOURCE: JLARC analysis of VCCS course, class, and student data, 2015–16 and 2024–25.
NOTE: Excludes dual enrollment and non-credit students. Online only includes students taking asynchronous only, synchronous only, or a mix of synchronous and asynchronous courses. Mix includes students taking hybrid courses, or a mix of online (which could be synchronous, asynchronous, or both) and in-person courses.

Students taking, and retaking, asynchronous courses are less successful, but the difference is somewhat small

Several different analyses indicate students are less successful when they take an asynchronous course, though the differences are not substantial. VCCS students taking asynchronous courses have lower success rates compared with in-person and synchronous peers (when comparing success across all credit courses offered). Students passed their asynchronous courses 73 percent of the time in 2024–25. This was 3 percentage points less than those students taking in-person courses (76 percent), 5 percentage points less than for synchronous online courses (78 percent), and 6 percentage points less than for hybrid courses (79 percent). The difference was larger for certain gateway courses. For example, success rates were 6 percentage points lower for students taking History 101 asynchronously than students taking the courses in-person; the difference was 10 percentage points for Communications 100, a public speaking course many students take early in their academic career.

JLARC staff defined "success" as a student earning a grade of A, B, or C or passing a pass/fail course. Failure was defined as earning a grade of D or F or withdrawing from a course. Both VCCS and research literature about online education define success and failure in this way.

Students were also less successful when they retook a course asynchronously, but the difference was also not substantial. In fall 2024, of the more than 7,000 students who retook a course asynchronously after previously failing or withdrawing, 42 percent were unsuccessful. This was 6 percentage points worse than students who retook a course in-person (36 percent).

VCCS plans to continue to expand the use of online courses in the next few years and specifically to increase the use of asynchronous courses. While the expansion of asynchronous online courses increases access and flexibility, VCCS and the colleges need to be sure that they strike the appropriate balance between the proportion of courses offered online and in-person going forward. Access and flexibility should not necessarily always be the highest priority, especially when students are less successful.

State's FastForward program has grown substantially, but demand this year will be higher than available funding

One of the major changes to the higher education landscape has been growing interest in short-term, skill-based credentials. This change is reflected in the growing proportion of CTE students enrolling in short-term FastForward courses. Between FY18 and FY25, the proportion of CTE students in FastForward courses has more than doubled (from 13 to 27 percent).

Funding for the program has increased but has not been able to keep up with recent program demand. Appropriations have grown from $5 million in FY17 to $24 million in FY26. Despite these increases, VCCS staff expect demand for the program to outpace available funding. VCCS indicates it will likely reduce or prioritize program offerings in the spring 2026 academic semester to stay within the budgeted amount of FastForward funding.

FastForward is a well-designed and effective program but success in meeting wage goals is mixed

The FastForward program has several features that make it well designed for students and community colleges. For students, FastForward programs are often shorter in duration than credit CTE courses, and they are often less expensive. For colleges, FastForward programs are easier to establish and discontinue than credit programs, providing greater flexibility to respond to changing workforce demand.

Though FastForward participant outcomes vary by type of course, the program overall seems effective. Nearly all (95 percent) FastForward participants complete the program. After program completion almost three-fourths of participants obtain a credential, and the rate of credential attainment has been increasing over time, particularly at some community colleges. Some programs, such as IT-related programs, have substantially lower rates of credential attainment.

In terms of wage gains, students who complete the program and obtain a credential make about $10,800 more annually than before the program (12 months after completion). The program's success in meeting its goal to help participants earn a household sustaining wage is mixed. The median wage for FastForward participants 12 months after receiving their credential was approximately $41,000, which is above a living wage threshold for a Virginia household with one adult ($34,200). More than half of FastForward completers, though, report having one or more dependents, and the $41,000 average is below a living wage threshold for a Virginia household with one adult and one child ($48,800).

Dual enrollment has been growing, but about a third of high school graduates participate and a very small proportion earn credential

Dual enrollment students have been the fastest growing segment of VCCS's enrollment. Between 2015–16 and 2024–25, dual enrollment grew 55 percent (from 37,400 students to 58,100). Dual enrollment students now comprise about one quarter of total VCCS enrollment.

Despite this growth, only about one-third of high school graduates took any dual enrollment courses during their high school career, and a very small proportion earn a credential through dual enrollment (table).

Small proportion of students complete any VCCS credential before graduation

Graduating dual enrollment students who…	# students	% participating students	Estimated % all high school graduates
…earned any VCCS credential (including Passport and UCGS)	3,034	9%	2.0–3.0%
…earned UCGS [a]	1,252	4	1.0–1.3%
…completed only Passport	626	2	0.6–0.8%
2024 graduates who took any dual enrollment courses	33,504	--	27.0–36.0%

SOURCE: JLARC staff analysis of VCCS student, class, course, and graduation data for high school students graduating in 2024.
NOTE: Represents cohorts of students who graduated from high school in 2024 and had taken at least one dual enrollment course during high school. Does not include non-VCCS students who take dual enrollment at a four-year institution. [a] Students who complete the UCGS are assumed to have completed the Passport, except in very rare circumstances.

CCRV implementation is underway, but additional effort and realistic planning is needed

The 2024 General Assembly created the College and Career Ready Virginia (CCRV) program, which prohibits colleges from charging high school students who take certain dual enrollment courses and expands course availability. VCCS has directed colleges to stop charging students as of fall 2025 and required all school divisions to provide courses that would allow students to complete UCGS or Passport.

To meet CCRV requirements, colleges are working with school divisions to ensure that every qualified student has a pathway to complete UCGS or Passport, but this will require online courses in many divisions that do not have resources to offer all courses in high schools. CCRV allows VCCS to offer these courses virtually. However, stakeholders have cautioned that online learning may not be appropriate for all high school students who are taking accelerated classes. Given this concern, CCRV requires VCCS and VDOE to develop a plan to collect and report state-level and division-level outcome data.

A substantial difference between student *eligibility* and student *interest* makes it challenging to plan for additional dual enrollment capacity needed to meet future demand. If all eligible high school students participated in dual enrollment, the number of eligible dual enrollment students would increase by between 75 and 115 percent. However, there are several factors that may limit further growth in dual enrollment, including a lack of preparation and academic performance needed to take advanced coursework, alternative advanced course options (such as AP courses), and a shortage of dual enrollment teachers.

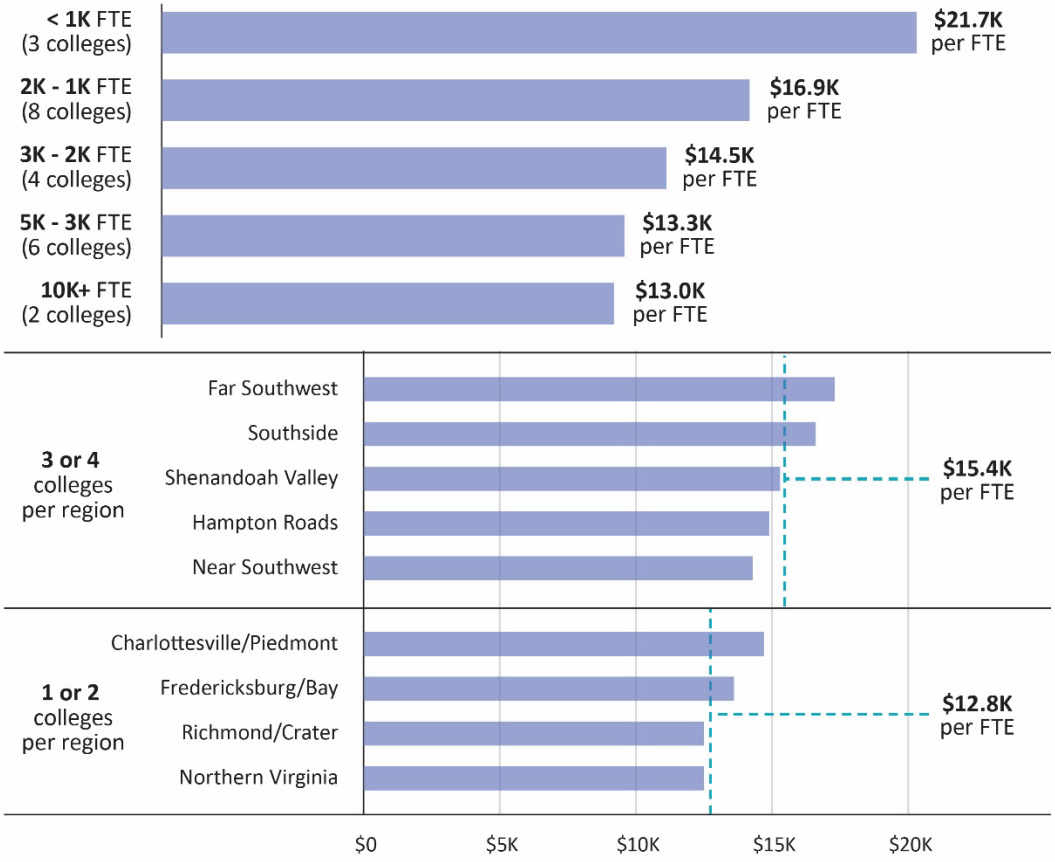
While there is substantial interest in expanding participation in dual enrollment, VCCS and other stakeholders need to be realistic about the factors that could potentially limit its growth. Otherwise, there is a risk of expending resources to build unneeded

capacity, which will impose an unnecessary burden and workload on school divisions, taking time and resources away from other priorities.

Changing landscape warrants at least considering a more regionalized approach to improve efficiency

VCCS already has some characteristics of a regionalized system. For example, Northern Virginia Community College, with its six campuses in four localities serves the most students in the state and is the second most efficient in the state based on spending per student. In contrast, the smaller community colleges and those in regions with more colleges are significantly less efficient, spending significantly more per student (figure).

Larger colleges and regions with fewer colleges spend less per student



SOURCE: JLARC analysis of VCCS student enrollment data, 2023–24, VCCS financial statements, FY24.

Inefficiencies are evident in class sizes and space utilization. Many smaller colleges with declining enrollment have a considerable number of classes with fewer than 10 students (sidebar). Moreover, as colleges increasingly provide education via virtual platforms, they have more unused classroom space. Five small colleges offer over half

At current tuition rates, **when enrollment falls below 10 students,** community colleges may not "break even" on the course when accounting for faculty costs and other indirect costs.

of their courses asynchronously online, resulting in 40 percent or less of available classroom space being used.

With changing trends in enrollment and course delivery, VCCS needs to fully consider opportunities to improve efficiency in fulfilling its mission. Some other states have sought greater system efficiency through mergers and other regionalization initiatives. While mergers or consolidation of colleges may not be called for, there are less drastic regionalization opportunities that could help to achieve greater efficiency.

WHAT WE RECOMMEND

Executive action

- Require students retaking a course asynchronously to meet with an advisor or faculty member to discuss strategies to help ensure success.
- Periodically evaluate the appropriate balance between asynchronous, hybrid, and in-person courses, and establish policies to minimize worse outcomes for online students.
- Further evaluate the FastForward program's impact on participant employment, credential type and attainment, and longer-term wage gains.
- Initiate a strategic review and propose a plan for how the system can more efficiently deliver services, especially in regions with smaller colleges.

The complete list of recommendations is available on page vii.

Recommendations: Virginia's Community Colleges and the Changing Higher Education Landscape

RECOMMENDATION 1

The Virginia Community College System should ensure colleges are aware of the appropriate definition of each course format and verify that colleges are accurately entering each course's format in the student information system. (Chapter 2)

RECOMMENDATION 2

The Virginia Community College System should require that any student retaking a course asynchronously online in which they previously earned a D or F or withdrew from the course to meet with an advisor or faculty member before the end of the academic term's drop/add period to discuss that students tend to be less successful in asynchronous retakes and strategies the student can use to help ensure their success in the course. (Chapter 2)

RECOMMENDATION 3

The Virginia Community College System should (i) periodically monitor student success in asynchronous courses compared to the same courses taught in person and synchronously; and (ii) work with individual colleges to address the root causes of relatively lower student success in asynchronous courses, if occurring, and implement approaches to improve outcomes. (Chapter 2)

RECOMMENDATION 4

The State Board for Community Colleges should periodically evaluate the use of asynchronous online learning, including the appropriate balance between the number of asynchronous, hybrid, and in-person courses in the community college system, and establish policies to guide community colleges' use of various course formats to minimize less successful student outcomes in online courses. (Chapter 2)

RECOMMENDATION 5

The Virginia Community College System should identify opportunities to improve the FastForward program by further evaluating whether (i) FastForward completers obtain and keep jobs in the occupational field for which they were trained, (ii) the credentials attained by FastForward completers are desired by employers, (iii) additional strategies can be used to achieve higher student credential rates, (iv) FastForward participants are stacking their credentials and thereby increasing their wages; and (v) wages increase three and five years after program completion. (Chapter 3)

RECOMMENDATION 6

The Virginia Community College System should create a new staff position solely dedicated to coordinating dual enrollment within the system and among colleges. (Chapter 4)

RECOMMENDATION 7

The State Board for Community Colleges should direct staff to begin collecting comprehensive information about how colleges are utilizing physical space, including data on non-credit course and other uses, such as rentals or use by local governments or K–12 schools. (Chapter 5)

RECOMMENDATION 8

The State Board for Community Colleges should direct Virginia Community College System staff to initiate a strategic review and propose a plan for how the system can efficiently deliver services, especially in regions with smaller colleges. (Chapter 5)

1 Virginia's Community Colleges

In 2024, the Joint Legislative Audit and Review Commission (JLARC) directed staff to review how well the Virginia Community College System (VCCS) is adapting to the changing higher education landscape (sidebar). Staff were directed to review the use of virtual instruction, students' acquisition of skills and credentials to meet the state's workforce needs, and opportunities for high school students to gain postsecondary credentials. Staff were also directed to review how other states' community college systems have adapted to the changing higher education landscape and how Virginia's community colleges could gain operational efficiencies. (See Appendix A for study resolution.)

JLARC's first study, in 1975, was a review of VCCS. JLARC conducted subsequent reviews of VCCS in 1991 and 2017.

JLARC also studied workforce development programs in 2014 and dual enrollment in 2022.

JLARC staff used various research methods to address the study mandate, including interviews with VCCS senior leadership and other system office staff, community college presidents, community college academic affairs and workforce training staff, dual enrollment staff in K–12 school divisions, four-year institution registrars, and national subject matter experts. Staff analyzed data on enrollment levels and trends, student outcomes, and college-level financial trends. Staff developed and administered two data collection instruments (one about dual enrollment sent to local school divisions, and one about advising and course development and oversight sent to each community college). Staff reviewed relevant documentation, including VCCS's policy manual, State Board of Community College meeting materials and minutes, and dual enrollment memorandums of understanding. (See Appendix B for a detailed description of research methods.)

Virginia's community college system offers wide array of courses

In 1966, the General Assembly created the Virginia Community College System to provide higher education options that were more accessible and affordable than four-year institutions. VCCS operates colleges throughout the state and has an open admissions policy that allows any adult with a high school diploma or equivalent to be admitted.

Most VCCS students are part-time students. In 2024–25, approximately 82 percent of VCCS students were taking classes part time (i.e., taking fewer than 12 credits per semester or fewer than 24 credits per academic year). Community colleges generally serve more working age adult students (age 25 and over) and students who are working while attending school, which often results in these students taking part-time academic loads. This phenomenon results in community colleges serving a large number of total students (referred to as "headcount") and fewer full-time equivalent (FTE) students (sidebar).

Full-time equivalent (FTE) students is a standardized way of describing enrollment that divides the total number of credit hours taken by students in an academic year at a higher education institution by 30 credit hours. FTE can be an especially useful measure when considering funding and spending, but it does not reflect the total number of students served by an institution. For community colleges, this is especially true because of the number of part-time students served.

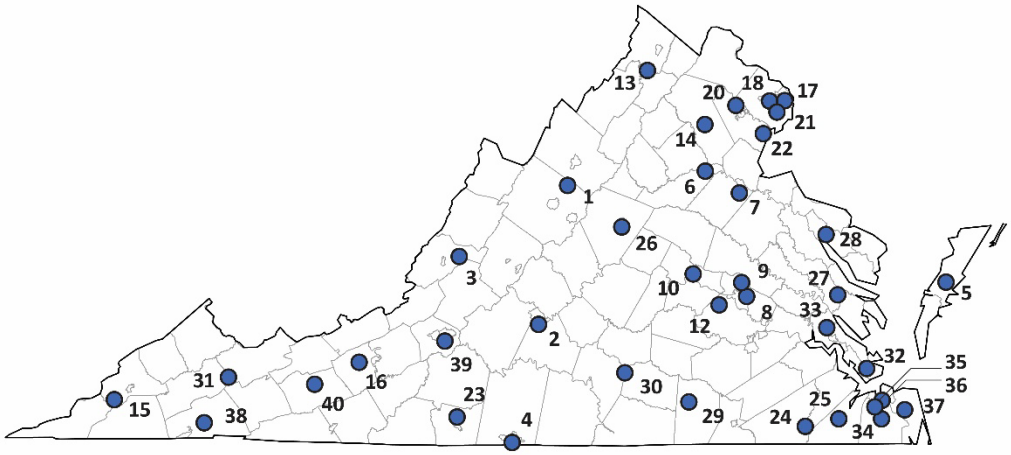
This report will primarily use **headcount** to describe VCCS's enrollment, because it better reflects the total number of students served. FTEs will be used only in Chapter 5 for discussions of spending and funding.

The Code of Virginia establishes several objectives for VCCS, including workforce training; arts and sciences instruction that can transfer to baccalaureate degrees; career and technical education that leads directly to employment; and training that meets the needs of the state's businesses and industries.

VCCS includes a state board, system office, and 23 individual community colleges

VCCS operates 23 community colleges with 40 campuses across the state (Figure 1-1). Each college serves a distinct service area made up of several localities. Most regions of the state (excluding Northern Virginia) are served by more than one college; Northern Virginia is served by a single college with six campuses.

FIGURE 1-1
VCCS has 23 colleges with 40 campuses



SOURCE: Virginia Community College System.
NOTE: Map shows each community college campus. VCCS has 23 colleges with 40 campuses.

The governance and administration of VCCS is multi-layered, but the system is relatively centralized compared with Virginia's public four-year institutions. While each college has its own president and operates with some autonomy, colleges' operations are influenced by statewide policies set by the State Board for Community Colleges and the VCCS system office. The VCCS chancellor leads the system office and serves

as the chief executive officer of the system and secretary to the state board. The state board, a governing board, sets tuition and fees, determines the programs and curricula colleges should offer, confers degrees, and appoints the chancellor. The VCCS system office coordinates the administration of board policies and provides support to the colleges.

Each community college is led by its own president and local advisory board and has some autonomy in academic offerings and spending. Colleges can create certificate programs, discontinue courses and certificates, and spend funds at their discretion. Each local advisory board reviews new curricula to recommend for state board approval, recommends plans for design and construction of facilities to the state board, reviews and approves their respective college budgets, and works with the chancellor to choose the college president.

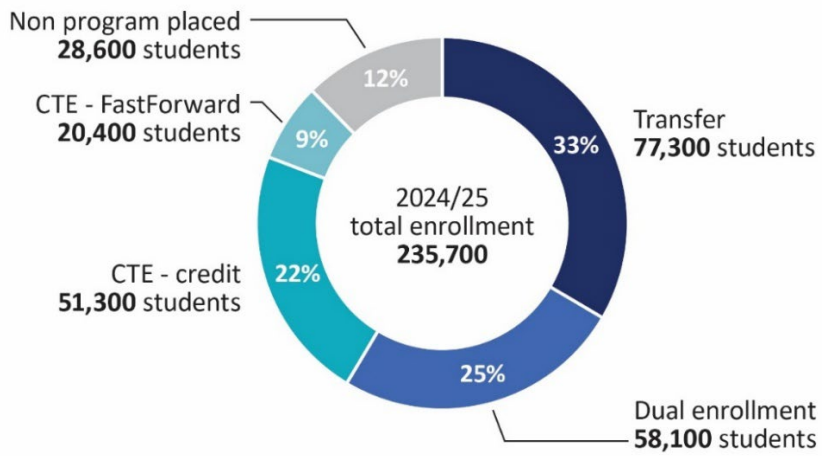
Colleges offer different types of credit and non-credit programs

VCCS offers credit and non-credit programs that are designed to either (1) provide college-level credit courses and degrees that can be applied to a baccalaureate degree at a four-year institution (referred to as "academic transfer programs" throughout this report), or (2) train or retrain workers for success in the workforce (referred to as "career and technical education programs" or "CTE programs" throughout this report).

VCCS enrolls four types of students: (1) academic transfer, (2) CTE, (3) dual enrollment, and (4) non-program placed students (sidebar, Figure 1-2). Academic transfer students make up the largest proportion of community colleges' enrollment. Dual enrollment high school students are the second-largest category of VCCS's enrollment.

Non-program placed students are students who are enrolled to take classes but not enrolled in any degree program at the community college. These are often students who take one or two courses for enrichment, students in continuing education, or students from other higher education institutions taking just a few classes through the community college.

FIGURE 1-2
Academic transfer students are the largest group of VCCS enrollment



SOURCE: VCCS annual enrollment by program, 2024–25.
NOTE: Represents total headcount of students enrolled in a VCCS college at any point in the 2024–25 school year. May not add because of rounding.

Industry-recognized credentials are earned through passing a test that certifies the student has attained a certain skill level. Examples of industry-recognized credentials include American Academy of Professional Coders Certified Professional Coder, Amazon Web Services Cloud Practitioner certification, and National Healthcareer Association Certified Phlebotomy Technician certification.

Dual enrollment students can be enrolled in either academic transfer or CTE courses, but the majority are enrolled in academic transfer courses. CTE students can be enrolled in credit programs (e.g., applied associates, career studies certificate, certificate) that require up to two years of full-time study to complete, or they can be enrolled in FastForward non-credit short-term courses that typically require six weeks to six months to complete. FastForward courses do not result in a credential award from the college, but they prepare and qualify the student to earn an industry-recognized credential (sidebar).

VCCS is funded primarily through tuition and fees and general funds

VCCS is one of the state's largest agencies by appropriation, with the 8th largest appropriation in FY25, based on total state appropriations ($1.5 billion in FY25; $1.4 billion in FY26). These appropriations include both general and non-general funds, including tuition and fee revenue. The primary source of non-general fund revenue is the tuition and fees charged by the colleges.

Individual colleges, for the most part, are allowed to keep the tuition and fees that they collect from students, so these funds are appropriated but do not flow through the system office. The General Assembly appropriates general funds to VCCS, and the VCCS system office allocates most of these funds to colleges. The system office retains a relatively small portion of the total funds to support itself.

In recent years, general fund appropriations have increased, which has helped maintain and increase affordability for students. The proportion of colleges' total revenue from state funds increased from 38 percent to 50 percent from FY18 to FY24. This occurred because the amount of state funds increased and the amount of tuition revenue decreased.

Changing higher education landscape is affecting community colleges

Economic changes and shifting student expectations are changing the landscape within which VCCS operates. This new landscape consists of:

- a pending decline in the number of high school graduates because of lower birth rates;
- strong student demand for online education, especially since the pandemic;
- skepticism about the value of traditional academic courses and degrees; and
- growing interest in technical and vocational training and credentials that directly translate to a job.

This report assesses VCCS's adaptation to this new landscape and identifies further actions the system may need to take to continue to adapt in the future.

Enrollment at nearly all community colleges declined over last decade but has grown recently

VCCS's total enrollment and that of most of its colleges declined over the last decade, which is at least partially attributable to the generally strong economic conditions during the period (sidebar). VCCS's enrollment declined 7 percent between academic years 2015–16 and 2024–25 (from 252,800 to 235,700). In addition, enrollment at 15 out of 23 colleges declined during this time period. This decline mirrors a national trend. Enrollment at public two-year institutions nationally declined approximately 7 percent between fall 2019 and fall 2024, according to the National Student Clearinghouse Research Center.

VCCS's **enrollment was at an all-time high in the years during and following the Great Recession** (2009–2012) because community college enrollment trends are counter-cyclical to the economy (e.g., community college enrollment rises in down economic times).

More recently, VCCS enrollment overall (and at each of its colleges) has grown. Since the 2022–23 academic year, total enrollment increased 9 percent (from 215,300 to 235,700). All 23 colleges have seen increases in enrollment over the past three years (Figure 1-3).

However, these recent increases may not continue because of demographic trends. VCCS will likely begin to experience a decline in traditional college-age students in the next three to five years. Due to a declining birth rate, there will be fewer high school students through at least 2030, reducing the pool of typical students. (Chapter 5 addresses enrollment and efficiency.)

VCCS enrollment would be much lower without growth in dual enrollment and FastForward programs

Over the past decade, VCCS has been losing enrollment in its traditional credit student groups (academic transfer, credit CTE, and non-program placed). Between 2015–16 and 2024–25, VCCS enrollment for these traditional student groups declined from 215,400 to 157,200 (27 percent) (Figure 1-4). Over half of that decline was attributable to the decline in academic transfer students, which decreased by over 30,000 students.

VCCS offers some **other non-credit workforce training programs** that are not FastForward programs. Enrollment for these programs is relatively small and not reported in VCCS enrollment figures in this report.

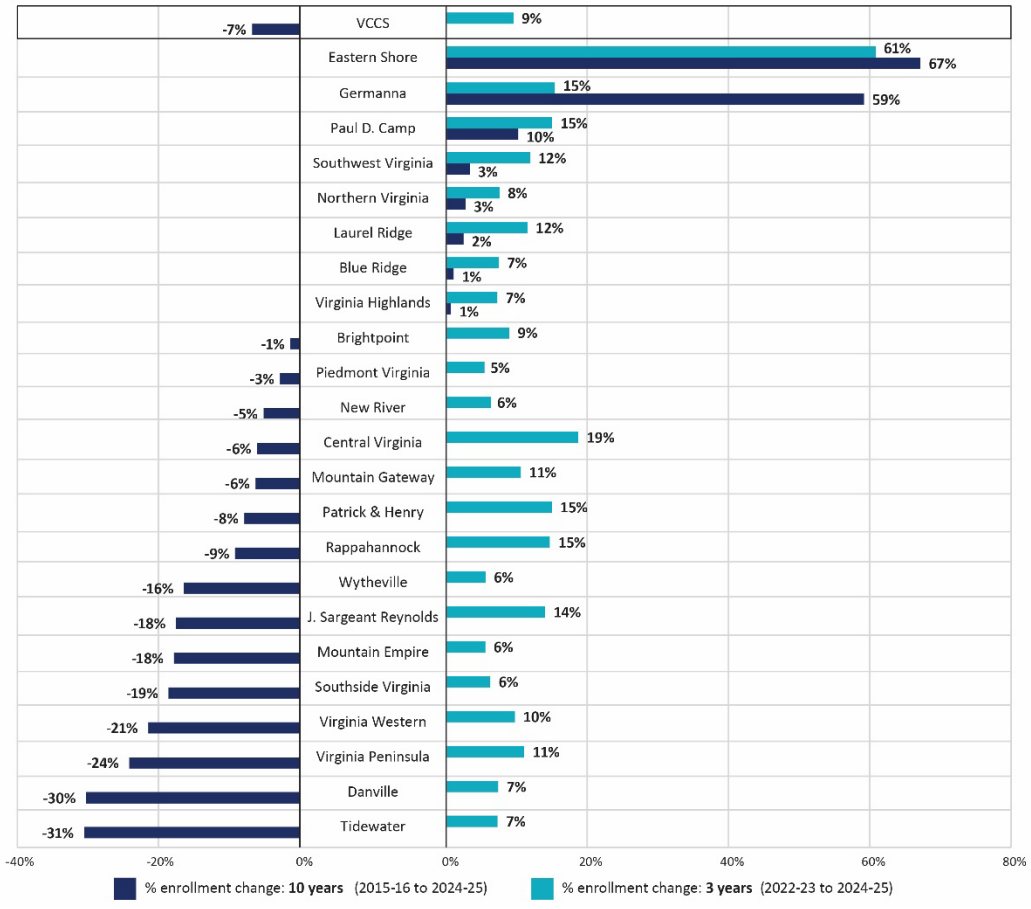
Growth in dual enrollment and FastForward programs has mitigated much of the enrollment decline at community colleges (Figure 1-5). Between 2015–16 and 2024–25, dual enrollment grew 55 percent. FastForward began enrolling students in 2016–17 and has grown to more than 20,000 students.

Dual enrollment and FastForward students are typically different from those who take academic transfer courses. Dual enrollment students are different from traditional VCCS students because they are high school students, and most dual enrollment courses are not taught at the community college or by a community college instructor. High school instructors, who meet VCCS's criteria for faculty in the discipline they are teaching, teach most dual enrollment courses; over 80 percent of dual enrollment courses appear to be taught at high schools. FastForward students are different from traditional VCCS students because their programs are focused on a single occupational

skill set, and students are only taking classes for a short period of time, typically less than a full academic semester.

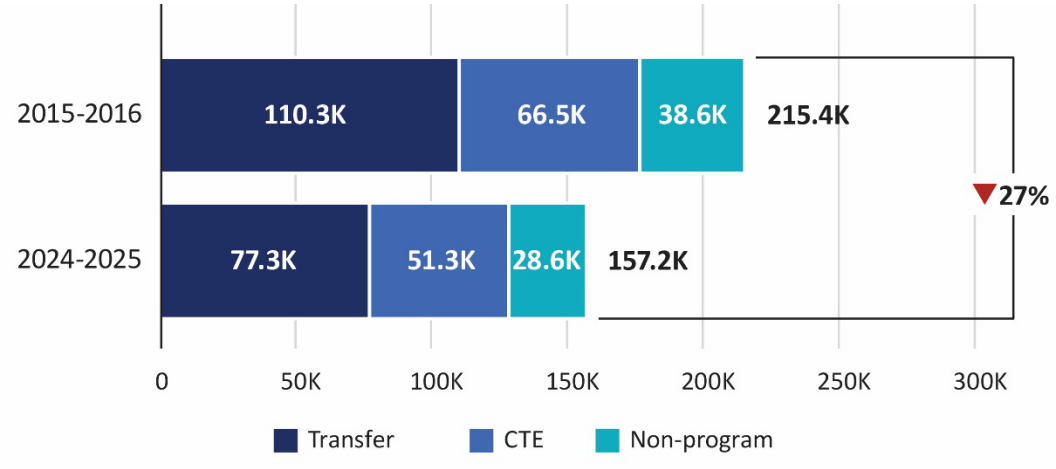
Enrollment composition varies significantly by college, but some colleges now have a much smaller proportion of traditional students. For example, three of the system's smallest colleges (Mountain Gateway, Eastern Shore, and Paul D. Camp) have enrollments with less than 45 percent who are traditional students. At Mountain Gateway, for instance, traditional students account for 37 percent of enrollment; dual enrollment students account for 25 percent of enrollment; and FastForward students account for 25 percent of enrollment. These changes have implications for the system's and colleges' revenues, spending, and efficiency.

FIGURE 1-3
Many community colleges lost enrollment over the past decade, but all have been regaining enrollment recently



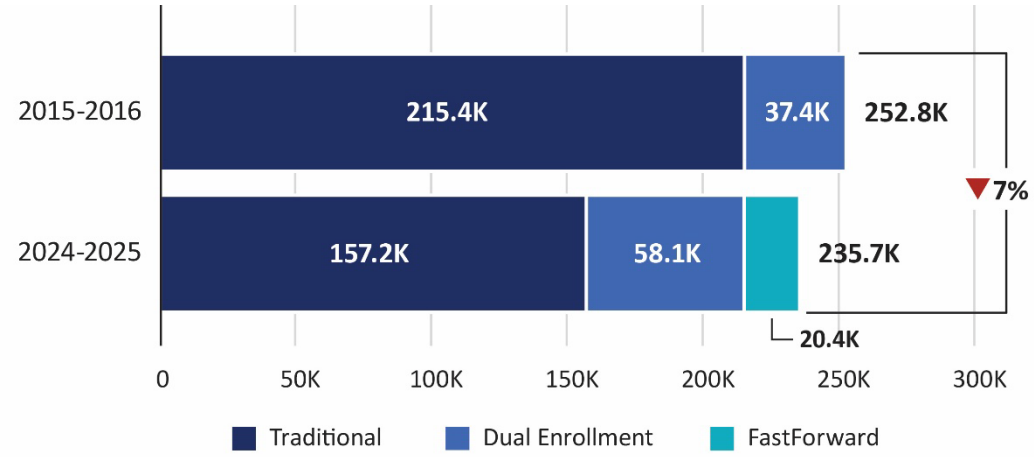
SOURCE: JLARC analysis of VCCS annual headcount enrollment data, 2015–16, 2022–23, and 2024–25.
NOTE: Enrollment represents total headcount for each institution, which includes full-time and part-time students. Enrollment figures include dual enrollment and FastForward students.

FIGURE 1-4
Enrollment for academic transfer, credit CTE, and non-program placed students has declined significantly over the last decade



SOURCE: JLARC analysis of VCCS annual headcount enrollment data, 2015–16 and 2024–25.
NOTE: Enrollment represents total headcount, which includes full-time and part-time students. Enrollment figures exclude dual enrollment and FastForward students.

FIGURE 1-5
Dual enrollment and FastForward growth have compensated for much of the enrollment decline in traditional students



SOURCE: JLARC analysis of VCCS annual headcount enrollment data, 2015–16 and 2024–25.
NOTE: Enrollment represents total headcount, which includes full-time and part-time students. Enrollment figures include dual enrollment and FastForward students.

Most students now take at least some classes online

Students' expectations about course delivery have changed, with students increasingly desiring online and on-demand courses. Virginia community colleges are embracing

online education, especially for transfer academic courses. In the 2024–25 school year, over 85 percent of VCCS students were taking at least some classes online.

The shift to online instruction has several potential implications for the community colleges and its students. The shift has made education more accessible for students with busy schedules or with greater distances to travel. The shift does, though, raise questions about whether student success is negatively impacted. The shift will affect colleges' use of current and future need for physical classroom space, as well as colleges' operational efficiencies. (Chapter 2 addresses online education.)

The 2024 General Assembly adopted the **College and Career Ready Virginia (CCRV)** program (2024 Acts of Assembly, Chapters 647 and 684), which requires school divisions and community colleges to expand access to dual enrollment beginning in fall 2025. Specifically, the law requires that certain courses be offered to high school students free of charge and that a series of dual enrollment courses be offered to allow students to take most college-level general education courses through dual enrollment.

Chapter 4 of this report provides additional information about CCRV.

Lower proportion of traditional students reflects changing landscape

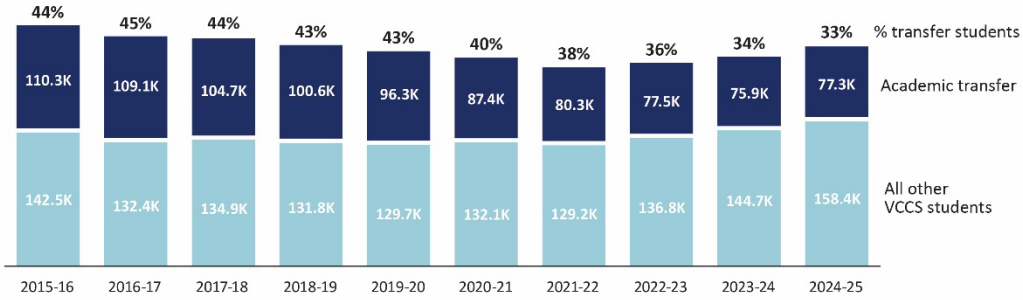
The proportional change in community college student enrollment reflects the public's changing perception about higher education. Increasing college costs and economic uncertainty have resulted in increased interest in career and technical training programs among potential students and families. In addition, high school students have been increasingly interested in improving their college application prospects, raising their GPA, or reducing the cost of obtaining a degree by taking dual enrollment courses (sidebar).

Shift away from academic transfer reflects changing landscape

Changing attitudes toward college, and the value of a four-year degree in particular, appear to be affecting VCCS's enrollment of academic transfer students. Several national and state-level surveys have shown that students and families are questioning whether four-year degrees are worth the time and money.

Although still the largest share of VCCS's enrollment in 2024–25, academic transfer students make up a smaller share of all community college students than they did a decade ago. Between 2015–16 and 2024–25, the proportion of students enrolled in academic transfer courses declined from 44 percent to 33 percent (from approximately 110,300 to 77,300 part- and full-time students) (Figure 1-6).

FIGURE 1-6
Proportion of VCCS students in academic transfer programs has declined



SOURCE: JLARC analysis of VCCS annual headcount enrollment by program data, 2015–16 to 2024–25.
NOTE: Enrollment represents total headcount for each institution, which includes full-time and part-time students. Enrollment figures include dual enrollment and FastForward students.

Over the past decade, 21 out of the 23 colleges had declines in the number of academic transfer students enrolled. The median decline in academic transfer student enrollment was 26 percent over the decade. Five colleges lost more than 40 percent of their academic transfer enrollment over the decade (Mountain Empire, Mountain Gateway, New River, Tidewater, and Virginia Peninsula).

In the past three years, 13 out of 23 colleges regained some of their academic transfer enrollment. These 13 colleges with academic transfer enrollment gains had a median enrollment increase of 6 percent over the past three years.

Shift toward career and technical reflects reinvigorated workforce focus

National and state-level surveys indicate that potential students and their families have a growing interest in career and technical programs that directly connect to jobs. While community colleges have always offered these types of programs, VCCS is expanding them in response to increased interest. Some colleges are redesigning programs so they can be completed in a shorter timeframe than other CTE programs. For example, newer programs offer several stackable credentials that can be earned over a shorter time period (six weeks to six months) than applied associate degrees (which typically take two to four years to complete).

Overall, enrollment in all CTE programs has increased from 66,500 in 2015–16 to 71,700 in 2024–25 (8 percent). Before the pandemic, enrollment in credit CTE programs was declining, while enrollment in FastForward CTE programs was increasing. However, since the pandemic, enrollment in both credit CTE programs and FastForward programs has increased. FastForward students are now 28 percent of all CTE enrollment. (Chapter 3 addresses career and technical education.)

Over the past decade, total CTE enrollment increased at most community colleges (17 out of 23), and since the pandemic, all but one has experienced increases. Some colleges had particularly large increases in total CTE enrollment, and this appears to be almost entirely attributable to the introduction of FastForward. For example, total CTE enrollment nearly tripled over the decade at both Eastern Shore and Germanna. At both colleges, between 80 and 85 percent of the increased CTE enrollment was attributable to FastForward. Total CTE enrollment nearly doubled over the decade at another seven colleges (Blue Ridge, Brightpoint, Central Virginia, Laurel Ridge, Mountain Gateway, Paul D. Camp, and Rappahannock). At all but two of those seven colleges with doubled total CTE enrollment, the CTE enrollment growth was entirely attributable to FastForward.

Dual enrollment growth reflects increased interest in taking college-level classes in high school

Community colleges nationwide and in Virginia have seen an increase in dual enrollment participation. Dual enrollment nationally grew 7 percent between fall 2023 and fall 2024, and more than 2.5 million students nationally are taking some dual enrollment courses, according to the National Student Clearinghouse Research Center. Dual

enrollment students have been the fastest-growing segment of VCCS's enrollment. Between 2015–16 and 2024–25, the number of dual enrollment students grew 55 percent (from 37,400 students to 58,100). Over the same 10-year period, dual enrollment's proportion of total enrollment at VCCS increased from 15 percent to 25 percent.

Approximately half of colleges experienced dual enrollment growth over the decade, and over 90 percent of the growth in dual enrollment statewide occurred at three colleges. While dual enrollment grew 55 percent across all colleges, only 12 out of the 23 colleges experienced dual enrollment growth over the decade. However, three colleges — J. Sargeant Reynolds, Northern Virginia, and Tidewater — tripled their dual enrollment over the decade, accounting for 93 percent of VCCS's dual enrollment growth.

Since the pandemic, though, dual enrollment growth has occurred at most colleges, with 22 out of 23 colleges experiencing dual enrollment growth since 2022–23. Since 2022–23, dual enrollment changes ranged from a 4 percent decline at Central Virginia to a 42 percent increase at J. Sargeant Reynolds. Dual enrollment growth at J. Sargeant Reynolds, Northern Virginia, and Tidewater has been slower since the 2022–23 school year, but these three colleges still account for nearly two-thirds of the dual enrollment growth over the more recent time period.

The state is seeking to facilitate further increases in dual enrollment through the College and Career Ready Virginia program, which will make certain academic transfer courses free to students and allow all interested students to complete a college-level general education curriculum while in high school. (Chapter 4 addresses dual enrollment.)

2 Online Learning

VCCS colleges typically offer courses in a combination of several different formats, including in-person, synchronous, asynchronous, and hybrid (Table 2-1).

TABLE 2-1
VCCS colleges offer courses in different formats

Format	Description
In-person	Traditional face-to-face instruction in a classroom with an instructor and other students present.
Synchronous	Live instruction delivered online by an instructor using online video conferencing software (e.g., Zoom).
Asynchronous	Instruction generally delivered through a learning management system (e.g., Blackboard or Canvas) and includes a structured course with recorded lectures, readings, assignments, exams with due dates, and milestones. Coursework completed on student's schedule without any live instruction.
Hybrid	A combination of in-person and online (asynchronous or synchronous) instruction through which at least half of the course content is delivered online.
HyFlex	Option to attend an in-person course on campus or synchronously using online technology, and also complete work asynchronously week to week.

SOURCE: JLARC staff interviews with VCCS system office and community college staff.

Online asynchronous courses are developed based on syllabi and other materials from existing in-person courses, unless the course is new and specifically developed to be asynchronous. Subject matter faculty and college instructional design or technology staff generally collaborate to translate in-person instructional material and assignments to a structure that allows for self-paced learning. These changes often include recorded lectures, ungraded quizzes for students to self-check their understanding of material, third-party videos, and course discussions via message boards.

Online courses help increase access to higher education by providing flexibility for students and faculty (sidebar). Students who take asynchronous courses do not have to schedule courses around work, caregiving, or other responsibilities, or travel to campus, which can be especially beneficial to students in rural areas or students who live far from a community college. In addition, if a certain course is unavailable at their own college, students can enroll in an online course taught at another college (sidebar). Online instruction also facilitates faculty recruitment because professors are not restricted by a fixed schedule or the need to live near the college.

In addition to offering online courses through their own colleges, VCCS colleges can also participate in the **Shared Services Distance Learning (SSDL)** program. SSDL allows students from one VCCS college to take an online course taught by an instructor at another VCCS college.

VCCS college staff routinely reported in interviews that student demand for online instruction has increased. VCCS has offered online learning for at least 20 years, but its use has increased in recent years. The percentage of VCCS students taking at least one course online grew from 61 percent in 2015–16 to 88 percent in 2024–25 (excluding non-credit and dual enrollment students). As online learning has grown, VCCS has introduced new online learning models, adjusted online learning instruction, and offered more guidance to colleges to help improve the online learning experience and student outcomes.

A substantial proportion of Virginia community college education now occurs online

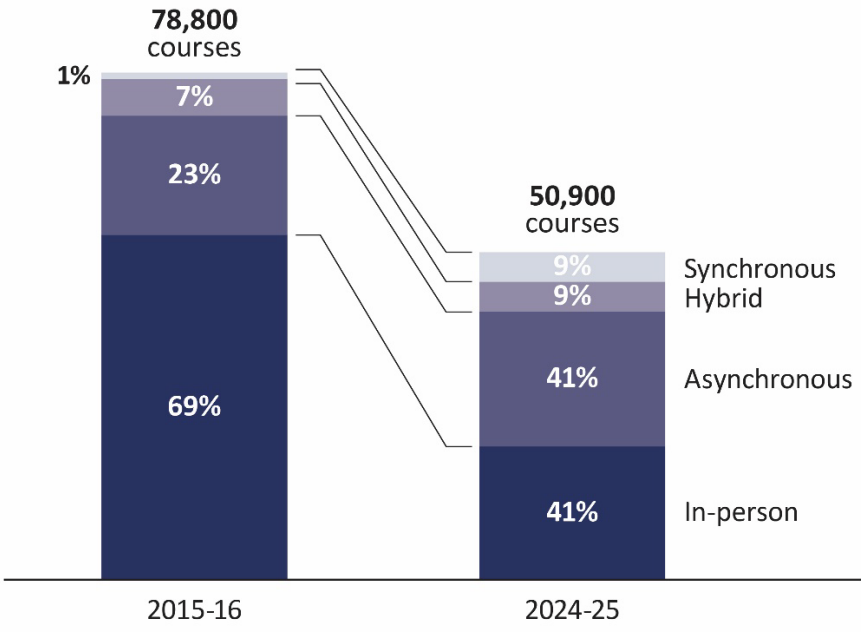
Analysis in this chapter **excludes dual enrollment students and courses** because most dual enrollment courses are taught by high school teachers in person at local high schools.

Virginia's community colleges have expanded their use of online courses in the last 10 years, a trend consistent with colleges across the country. Enrollment in online courses, both synchronous and asynchronous, spiked during the COVID-19 pandemic because colleges could not hold in-person courses in most cases. Although colleges reopened by spring 2022, the proportion of courses held online (synchronous and asynchronous) has not returned to pre-pandemic levels. VCCS would like to facilitate additional growth; its strategic plan sets a goal to increase online enrollment by 8,000 students by 2030 (sidebar).

VCCS courses are increasingly taught online

Since the 2015–16 academic year, a significant portion of VCCS's courses have shifted to online or hybrid formats. Most online courses are asynchronous, but other formats with online components—synchronous and hybrid—have become more common as well. In 2015–16, 24 percent of courses were taught entirely online (23 percent asynchronous and 1 percent synchronous) and 7 percent were taught in a hybrid format. By 2024–25, 50 percent were taught entirely online (41 percent asynchronous and 9 percent synchronous), and an additional 9 percent were taught in a hybrid format (Figure 2-1).

FIGURE 2-1
VCCS colleges teach fewer courses overall, and fewer in-person courses

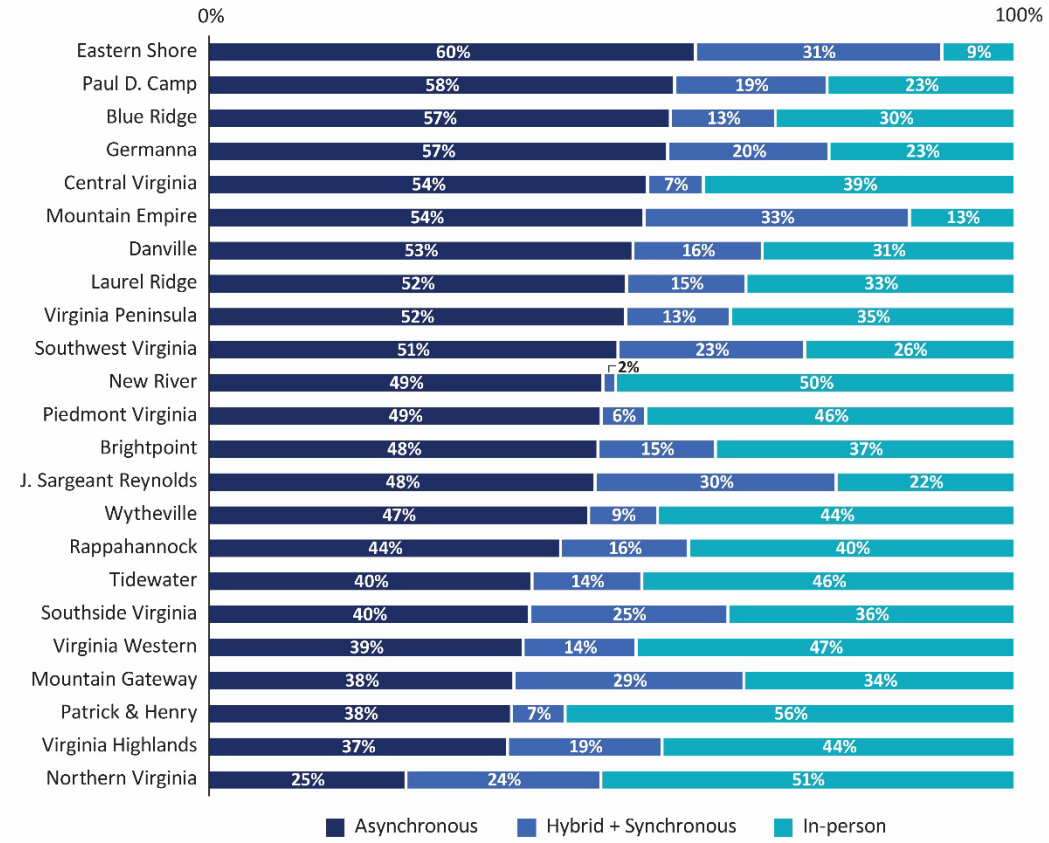


SOURCE: VCCS course and class data, 2015–16 and 2024–25.
NOTE: Excludes dual enrollment and non-credit courses.

VCCS colleges taught fewer courses in 2024–25 compared with 2015–16 because of enrollment declines. Most of the eliminated course sections were in-person, and the number of online and hybrid course sections remained relatively stable while becoming a larger proportion of courses overall.

Individual colleges' use of online learning varies significantly, but most colleges offer at least 50 percent of their courses in online or hybrid formats; the median college teaches 64 percent of courses online or hybrid. Colleges range from Eastern Shore, which offers 91 percent of its courses online or hybrid, to Patrick & Henry in Martinsville, which offers only 45 percent of its courses online or hybrid (Figure 2-2). Most online courses are asynchronous.

FIGURE 2-2
Most colleges offer high proportion of courses online, the majority of which are asynchronous



SOURCE: VCCS course and class data, 2024–25.
NOTE: Excludes dual enrollment and non-credit courses. Bars represent all credit bearing courses, including both transfer and other courses.

Most colleges have increased their use of online and hybrid courses significantly over time, and all colleges provide a lower proportion and number of courses in person since 2015. For example, 73 percent of J. Sargeant Reynolds's courses were in-person

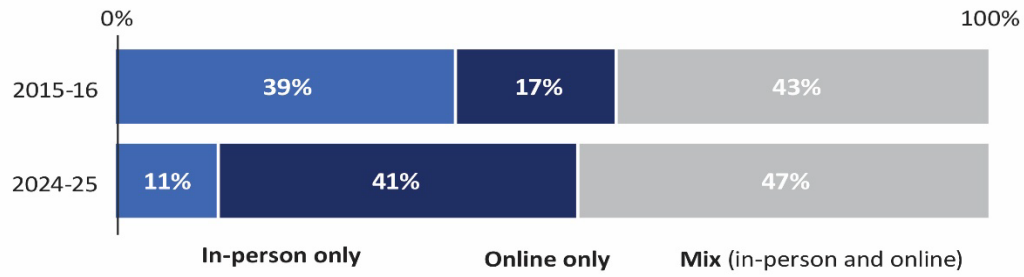
in 2015–16, compared with 22 percent in the 2024–25 school year. Colleges that did not significantly increase the proportion of their courses taught online over the last several years generally had adopted online learning earlier than other colleges.

Increased percentage of VCCS students take all courses online

The shift toward online learning is also apparent from the growth in the proportion of students taking online courses. Over the past decade, a growing proportion of VCCS students have been taking all their courses online. The proportion of students taking all their courses online increased from 17 percent in 2015–16 to 41 percent in 2024–25. At the same time, the proportion of students taking all their courses in-person has declined from 39 percent to 11 percent (Figure 2-3). A substantial portion of students take a mix of in-person and online courses, and that proportion has grown slightly (4 percentage points) over the last decade.

The shift to online learning has occurred with both asynchronous and synchronous courses. In 2024–25, 63 percent of VCCS students were taking at least one course asynchronously, a 22 percentage point increase over the past decade. Just 1 percent of VCCS students took any synchronous courses in 2015–16, but 25 percent of VCCS students did so in 2024–25.

FIGURE 2-3
Larger proportion of students taking all courses only online

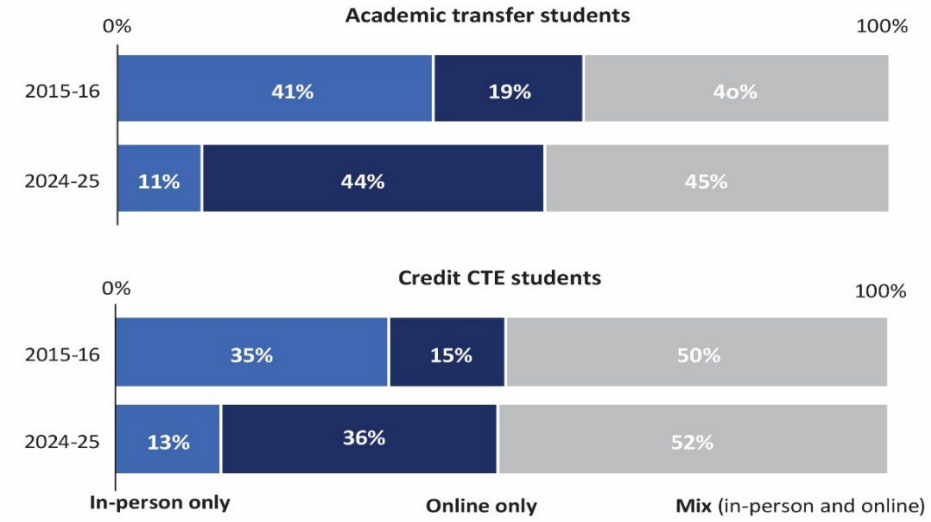


SOURCE: JLARC staff analysis of VCCS course, class, and student data, 2015–16 and 2024–25.
NOTE: Excludes dual enrollment and non-credit students. Online only includes students taking asynchronous only, synchronous only, or a mix of synchronous and asynchronous courses. Mix includes students taking hybrid courses, or a mix of online (which could be synchronous, asynchronous, or both) and in-person courses.

Shift to online enrollment occurring in both transfer and credit CTE courses

The shift toward online enrollment has occurred for both academic transfer and credit CTE students (Figure 2-4). Only 11 percent of transfer students and 13 percent of credit CTE students took all their courses in-person last year, and more than one-third of all credit CTE students took all their courses online.

FIGURE 2-4
Both academic transfer and credit CTE students are increasingly taking online courses



SOURCE: JLARC staff analysis of VCCS course, class, and student data, 2015–16 and 2024–25.
NOTE: Excludes dual enrollment and non-credit students. Numbers may not add because of rounding. Online only includes students taking asynchronous only, synchronous only, or a mix of synchronous and asynchronous courses. Mix includes students taking hybrid courses, or a mix of online (which could be synchronous, asynchronous, or both) and in-person courses.

While CTE programs are typically associated with hands-on disciplines like welding and EMT that require in-person training, many CTE programs can be taught online. Colleges increasingly offer career studies certificates and other credentials that are taught entirely online, such as programs in information systems technology, business management, accounting, criminal justice, and medical coding. Additionally, CTE students enrolled in programs typically associated with hands-on training (e.g., nursing, veterinary technician, electricity technology) are still able to take some of their courses, especially pre-requisite courses, online.

VCCS needs to ensure course format data from colleges is accurate

Data in this chapter can be used to gain a general understanding of the growth in online learning, but there is evidence that VCCS's data needs to be more accurate moving forward. JLARC staff reviewed the number of courses listed as hybrid and asynchronous in each college's electronic course catalog for fall 2024 and found about 7 percent of courses in VCCS's data on course format *may* have been mischaracterized as asynchronous when they were most likely hybrid courses (according to the course catalog). Additionally, colleges do not appear to consistently define the hybrid format (sidebar).

Going forward, VCCS should ensure data on course delivery method is as accurate as possible as colleges increase their use of courses with online components. VCCS

Differing definitions of hybrid courses. JLARC found varying definitions of a hybrid course. For example, one college defined hybrid as "delivered through a combination of on-campus instruction on the indicated time and day of the week with other instruction delivered online." Another college indicated that hybrid students "have the option of attending class in-person, live through Zoom, or asynchronously online."

system office staff indicated that they provide colleges with guidance via email at least annually on how to report course formats in the data system. However, college staff still report some course format data inconsistently. To ensure that course format data is as accurate as possible, the system office may need to provide additional or more extensive guidance on how to report formats (and ensure that the data system accommodates reporting hyflex courses). The system office should also more fully verify that colleges are providing accurate course format data.

RECOMMENDATION 1

The Virginia Community College System should ensure colleges are aware of the appropriate definition of each course format and verify that colleges are accurately entering each course's format in the student information system.

Students tend to be less successful in asynchronous courses, but the difference is not substantial

Ideally, students should have similar outcomes regardless of the delivery method, but some research has found that students enrolled in asynchronous online courses perform worse than their peers in the same courses taught in person. Many factors affect student success, but understanding student outcomes is important for VCCS as colleges have transitioned toward offering more online courses. In many cases, an online section of a course is the only option available to a student, either because there are no in-person sections available, the student cannot travel to campus, or the course schedule does not work for them.

Understanding whether the course format impacts student success is important, especially for gateway courses (sidebar). Failing or withdrawing from a gateway course can significantly slow a student's academic progress and wastes the state's and student's resources. Failing a course can also jeopardize a student's financial aid if the grade lowers their GPA below required levels for satisfactory academic progress, an eligibility requirement for financial aid. In addition, research suggests that community college students who fail courses are less likely to return in subsequent semesters. Succeeding in gateway courses early on in a student's academic career is also linked to higher transfer and completion rates overall.

JLARC staff defined "success" as a student earning a grade of A, B, or C or passing a pass/fail course. Failure was defined as earning a grade of D or F or withdrawing from a course. Both VCCS and research literature about online education define success and failure in this way.

Student success rates in asynchronous courses are lower than in other formats, but the difference is somewhat small

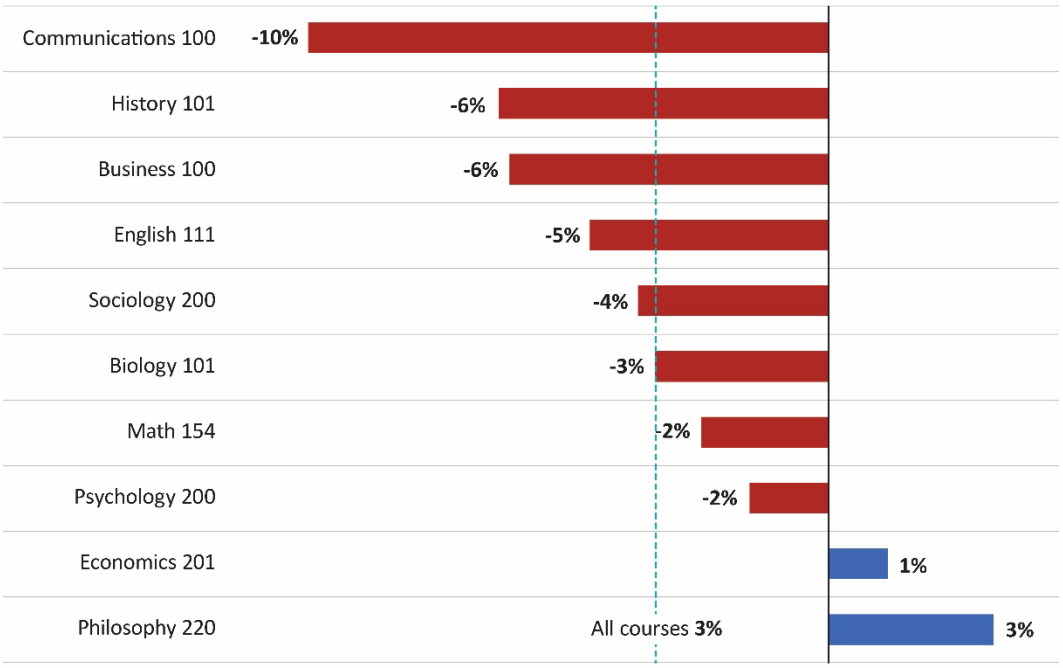
Several different analyses indicate students are less successful when they take an asynchronous course, though the differences are not substantial. VCCS students taking asynchronous courses have lower success rates compared with in-person and synchronous peers (when comparing success across all credit courses offered). Students passed their asynchronous courses 73 percent of the time in 2024–25. This was 3 percentage points less than the pass rate for in-person courses (76 percent), 5 percentage points

less than for synchronous online courses (78 percent), and 6 percentage points less than for hybrid courses (79 percent). This gap has closed some over time: in the 2018–19 academic year, 75 percent of in-person and 76 percent of synchronous students passed their courses, compared with 68 percent of asynchronous students (7 and 8 percentage point differences).

Student success rates for some general education courses taught asynchronously are lower

When examining specific gateway courses at VCCS colleges, students appear to perform worse in certain courses taught asynchronously (Figure 2-5). In particular, the pass rate for Communications 100, a public speaking course many students take early in their academic career, was 10 percentage points lower in asynchronous sections than in-person sections in 2024–25. There are also notable differences in History 101 (6 percentage points), Business 100 (6 percentage points), and English 111 (5 percentage points). Students in synchronous sections of these courses have similar outcomes to those taught in person.

FIGURE 2-5
Asynchronous and in-person outcomes differ by course



SOURCE: JLARC staff analysis of VCCS data, 2024–25.

A more rigorous statistical analysis also found a small, but statistically significant, difference when analyzing success by format in the 10 most popular general education courses (sidebar, next page). Based on a regression analysis that controlled for 14

factors, VCCS students who took these common gateway courses between fall 2018 and spring 2025 (excluding the pandemic period from spring 2020 through fall 2021) were less likely to be successful than peers taking courses in person, and this relationship was statistically significant. By controlling for other factors that may influence student success, this analysis allows student success to be compared by course delivery method throughout the community college system. (Appendix D contains a detailed discussion of the statistical analysis.)

JLARC staff analyzed 10 of the most popular general education ("gateway") courses intended to transfer to a four-year institution or count toward an applied associate degree. JLARC staff chose the courses with the highest enrollment in the most popular subjects to provide a cross-section of courses that illustrate student outcomes in multiple subjects, rather than choosing multiple courses from a single subject.

Appendix B has more information about the courses included.

In general, the gap in outcomes by course format has been closing over time in specific courses. For instance, in 2018–19, the gap in success rates for Math 154, a gateway math course, was over 10 percentage points, compared with just 2 percentage points in 2024–25. However, while asynchronous students taking English 111 had a 2 percentage point improvement in student success since 2018–19, the outcome gap with peers was still 5 percentage points in 2024–25. A 5 percentage point difference in fall 2024 equated to about 940 more students earning a D or F or withdrawing from asynchronous sections of English 111 than in-person sections.

These findings are consistent with some recent research literature. While the results of studies on online student outcomes are mixed, some studies with similar designs have also shown that course format is a significant factor in student outcomes, with asynchronous students having lower success rates than their in-person peers. One recent study also showed that the performance gap between the two formats has been decreasing in the post-pandemic years, suggesting that changes in online education and broader adoption may be reducing these differences.

Students retaking courses fare somewhat worse in asynchronous courses than in in-person courses

Students sometimes retake courses if they fail a course, want to improve their grade, or had to withdraw mid-semester. Overall, students who retake a course, regardless of format, have a lower-than-average pass rate: 62 percent of students retaking a course were successful in 2024–25, compared with 78 percent of students taking the course for the first time.

The retake pass rate is lower for students who retake a course asynchronously. In fall 2024, about 16,000 students retook a course in any format, with 44 percent taking an asynchronous section. Of the students who retook a course asynchronously, 42 percent were unsuccessful compared to 36 percent who retook a course in person. Regression analysis found this difference is statistically significant.

In addition to its effect on student academic progress, transfer, and general financial aid eligibility, failing a course on a retake can have further negative effects on students' finances and academic progress. Although students can retake a failed or withdrawn course without penalty, federal law only allows students to receive financial aid to retake a course after a low grade (like a D) one time, and a D or F can lower a student's

GPA below the level at which they qualify for financial aid. Without federal financial aid, the student is fully responsible for paying to retake a course.

Colleges need to prioritize supporting students retaking courses asynchronously to help them earn a grade that maintains their academic progress. Colleges should ensure that students who want to retake a course asynchronously are adequately prepared to do so and provide support to overcome the barriers that led to failure or withdrawal the first time.

VCCS should require students who are retaking a course asynchronously to meet with an advisor or faculty member. This meeting should occur early in the semester (before the end of the drop/add period) if the student previously earned a D or F, or withdrew from the course in any format. At a minimum, this meeting should address (i) any challenges that affected the student's performance in the original course and potential solutions to deal with those challenges, (ii) strategies to be successful in asynchronous courses, and (iii) that students tend to be less successful in asynchronous retakes.

RECOMMENDATION 2

The Virginia Community College System should require that any student retaking a course asynchronously online in which they previously earned a D or F or withdrew from the course to meet with an advisor or faculty member before the end of the academic term's drop/add period to discuss that students tend to be less successful in asynchronous retakes and strategies the student can use to help ensure their success in the course.

VCCS could better monitor student success and use of key practices for online education at colleges

Increased use of online education has provided greater access and flexibility for students. Colleges have been able to increase the number of courses available, and asynchronous courses give faculty greater flexibility. However, despite a decreasing and relatively small difference in student success between asynchronous and other course formats, disparities still exist. VCCS should take reasonable steps to ensure students are not disadvantaged by taking courses asynchronously, especially if this format becomes more common.

Community colleges appear to be implementing some, but not all, key practices to ensure online courses are high quality and to identify needed improvements. A review of academic research literature and interviews with college and VCCS office staff found five key practices:

(1) establish clear rubrics and criteria for what constitutes high quality online courses;

(2) provide instructors with specialized training on teaching online asynchronous courses;

(3) provide technical assistance to instructors with developing and teaching their online asynchronous courses;

(4) evaluate how well instructors adhere to the college's standards and criteria for high quality asynchronous courses; and

(5) review student outcome data to determine where current practices are not resulting in student success.

JLARC staff collected information from the community colleges about advising and development and assessment of online courses using a data collection instrument. Twenty (20) colleges provided responses to the data collection instrument. Appendix B provides more detail about this information collection.

Not all community colleges appear to be fully embracing all of these practices. While nearly all colleges reported that they use a rubric and standard criteria to ensure course quality (sidebar), only 10 colleges reported they give instructors specialized training to teach asynchronous courses. In addition, seven colleges lack dedicated non-instructional staff (such as instructional designers) to provide technical assistance to help faculty develop asynchronous courses. All colleges reported monitoring how well instructors adhere to the colleges' standards and criteria for high quality courses, but it is unclear whether institutional policies on monitoring frequency or triggers for more intensive review are consistent among all colleges.

VCCS does not currently evaluate 1) student success in asynchronous courses compared with students taking other course formats or 2) community colleges' approaches to ensure their asynchronous courses are high quality. For example, VCCS does not know whether colleges are using available approaches to monitor quality of asynchronous courses, such as course rubrics or course observations and evaluations. Without this information, the system office is limited in its ability to help colleges identify or address problems with asynchronous courses or challenges students face when taking asynchronous courses.

Moving forward, VCCS should further help to ensure student success in asynchronous courses by periodically monitoring student outcomes and helping individual colleges improve the quality of their course delivery. This has become especially important because of colleges' increased use of these courses and the system's goal to increase use.

RECOMMENDATION 3

The Virginia Community College System should (i) periodically monitor student success in asynchronous courses compared to the same courses taught in person and synchronously; and (ii) work with individual colleges to address the root causes of relatively lower student success in asynchronous courses, if occurring, and implement approaches to improve outcomes.

State Board should evaluate use of asynchronous courses and establish policies for their use

As noted earlier, VCCS has increased its use of online asynchronous instruction over the past decade with 41 percent of all VCCS courses in the last year being delivered

asynchronously. Further, 10 colleges teach at least half of their courses asynchronously, while all colleges teach at least one-quarter of their courses using this format. According to its strategic plan, VCCS plans to continue expanding use of asynchronous courses—by 2030, the system plans to offer all courses required for Passport and UCGS asynchronously every semester. The plan also states VCCS will increase its online headcount by 8,000 students (many of whom will likely take courses asynchronously). VCCS college staff and research literature recognize that online asynchronous courses are not appropriate for every student, and outcomes for asynchronous students can be worse than their peers taking courses in other formats. While most colleges have expanded their use of asynchronous courses in the past decade, some colleges have reported that they are encouraging at least some students to take in-person courses because of concerns about student outcomes.

While the expansion of asynchronous online courses increases access and flexibility, VCCS and the colleges need to be sure that they strike the appropriate balance between the proportion of courses offered online and in-person. Access and flexibility should not necessarily always be the highest priority, especially when students are less successful.

The state board should periodically evaluate the policy decision to expand the use of asynchronous learning and determine whether further expansion is appropriate. Information in this chapter and additional information periodically collected by VCCS can inform this process. Key questions to address include:

- whether a difference in student success rates between asynchronous and in-person or synchronous courses is acceptable, and the acceptable range of differences in student success rates;
- whether certain courses should not be offered asynchronously;
- whether certain colleges should be required to increase the use of synchronous, hybrid, or in-person courses and reduce the use of asynchronous courses;
- whether the appropriate proportion of courses are offered asynchronously and in-person across the system; and
- whether the benefits of providing asynchronous learning opportunities outweigh the potential adverse impact on student outcomes.

The state board should also provide colleges with policies to guide their use of different course formats. These policies could address factors colleges should consider when expanding asynchronous offerings, specific student outcome targets for asynchronous courses, or indicators that more in-person, hybrid, or synchronous sections of a course may be needed.

RECOMMENDATION 4

The State Board for Community Colleges should periodically evaluate the use of asynchronous online learning, including the appropriate balance between the number of asynchronous, hybrid, and in-person courses in the community college system, and establish policies to guide community colleges' use of various course formats to minimize less successful student outcomes in online courses.

3 Career and Technical Education

Career and technical education (CTE) has become increasingly important in Virginia and the nation because of shortages of workers to fill middle-skill jobs that require some training but not a four-year degree. One of the primary purposes of the Virginia Community College System (VCCS) is to offer courses to meet current and projected workforce training needs. All 23 community colleges offer technical, skill-based programs to prepare students to enter the workforce in a variety of fields including business and accounting, health care, welding, automotive maintenance, information technology, construction, commercial driving, and logistics. These programs are focused on teaching occupation-specific skills, with minimal or no inclusion of general education courses like math, history, and English (sidebar). Students can earn credentials ranging from a comprehensive applied associate degree to a narrowly focused career studies certificate or a noncredit industry credential, with programs varying in duration and the breadth of skills taught.

For this study**, career and technical education (CTE)** includes applied associate, certificate, career studies certificate (except the Uniform Certificate of General Studies), and diploma programs (credit programs), and noncredit FastForward programs. Limited data is available on other noncredit programs, so they are excluded from analysis in this chapter.

CTE programs are generally well aligned with high demand jobs, statewide and by region

Current community college CTE programs appear well aligned with employer needs for skilled workers to fill high demand occupations, statewide and by region. Seventy-six percent of CTE credit enrollment and 82 percent of FastForward noncredit enrollment across all community colleges in the 2023–24 and 2024–25 academic years were in a program that matches at least one occupation on the state's high demand occupation list. To be considered high demand, a job must meet several criteria related to employer need but also meet minimum wage and certain education-related criteria (sidebar). Seven of the 10 largest CTE credit programs and nine of the 10 largest FastForward programs in enrollment directly match at least one high demand occupation (Figure 3-1). (A program may not directly match a high demand occupation on the list because the program has no corresponding occupation code.)

The three large CTE credit programs and one large FastForward program that do not *directly* match a high demand occupation code can still lead to employment in high demand occupations (sidebar, next page). The business administration, management, and operations program does not directly match any specific occupation code, but community college staff indicate the program is designed to prepare students for a variety of business-related occupations that are in high demand. For example, completers of these programs could become accounting clerks or administrative support supervisors, both of which are on the high demand occupation list. Similarly, the program code for the FastForward highway and road construction program does not have

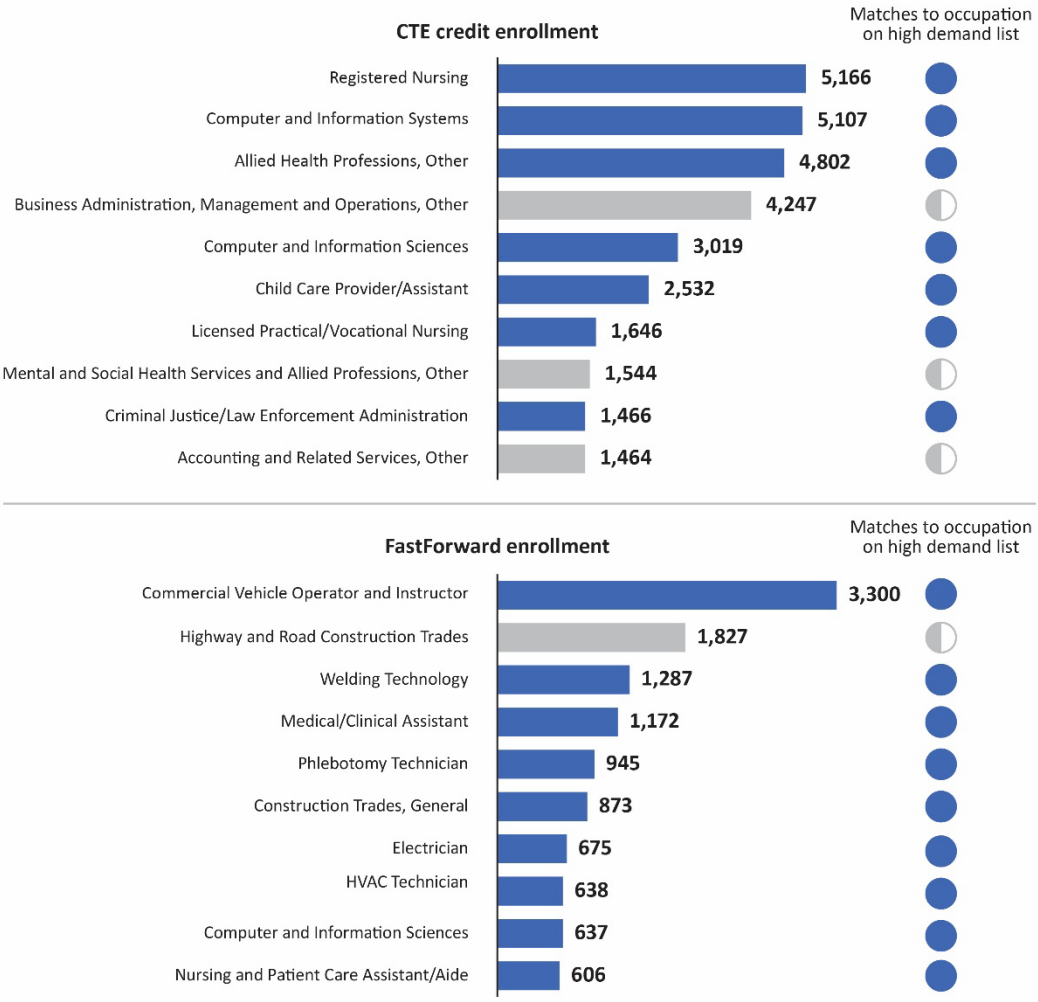
The Board of Workforce Development is responsible for publishing a biennial **list of high demand occupations**. The board commissioned the Virginia Office of Education Economics (VOEE) to compile the list for board approval starting in 2023. VOEE uses five key criteria to identify occupations for the list, including average annual job openings, projected job growth, qualified registered apprenticeships, minimum annual wage, and typical entry-level education required.

For this report, the high demand list was further restricted to include only occupations that are eligible for FastForward or G3 funding (See Appendix B for more information).

a matching occupation code, but highway maintenance workers and other road construction laborers are on the high demand occupation list.

The **CIP SOC Crosswalk** is produced by the Bureau of Labor Statistics and the National Center for Education Statistics and matches programs of study by Classification of Instructional Programs (CIP) codes with occupations by Standard Occupational Classification (SOC) codes. The crosswalk matches programs to occupations based on program and occupation descriptions and staff expertise. The crosswalk is not necessarily an exact match of degrees to occupations, but it is the best tool available for assessing alignment of academic programs to workforce needs.

FIGURE 3-1
Most large credit CTE and FastForward programs directly match an occupation on the state's high demand occupation list



SOURCE: JLARC staff comparison of VCCS community college enrollment in 2023–24 by CIP program (sidebar) and the high demand occupation list, using the CIP-SOC crosswalk.
NOTE: Includes headcount enrollment. Computer and information systems includes security, auditing, and information assurance training. Business administration, management, and operations (CIP 52.0299), mental and social health services and allied professions (CIP 51.1599), and accounting and related services, other (CIP 52.0399) are broad "other" categories that do not match to a standard occupation code. Highway and road construction is construction trades, other (CIP 46.9999), which does not match a standard occupation code and includes the FastForward programs for asphalt paving and other road-related construction.

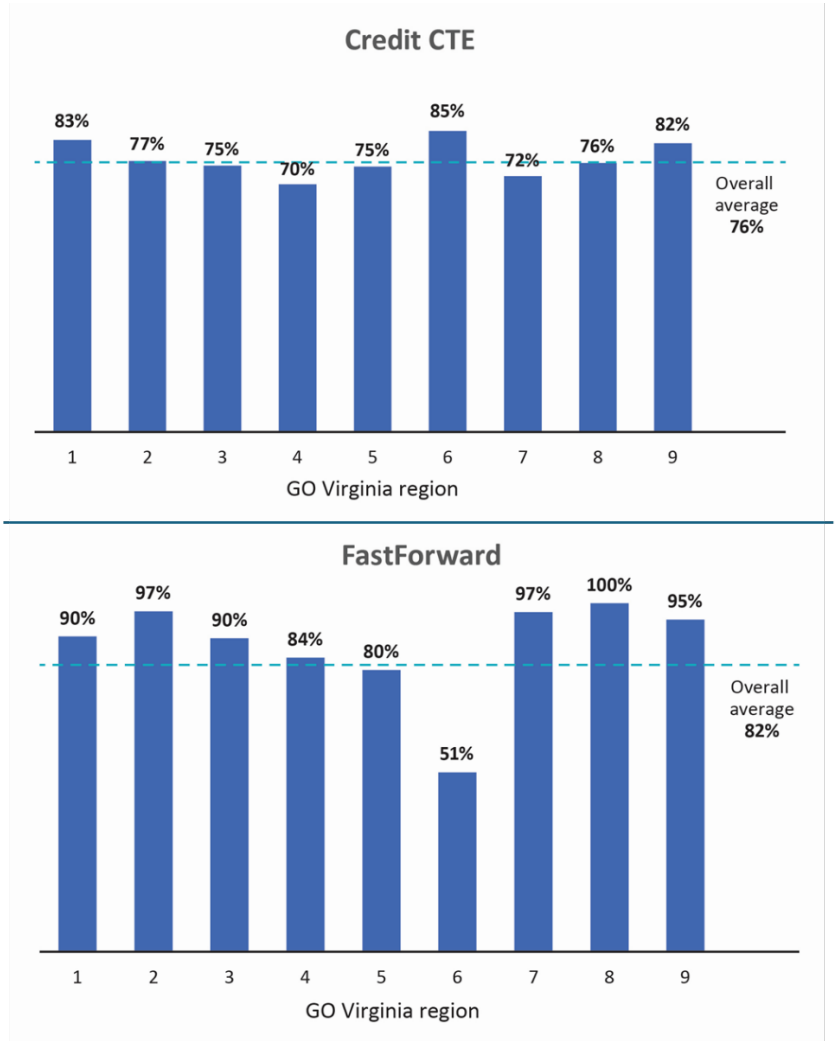
Some CTE credit and FastForward programs may not match an occupation on the state's high demand occupation list for other reasons. For FastForward programs in particular, programs may be in high demand in a specific *region* but not statewide. For

example, the FastForward programs for marine and ship repair technicians are in high demand in the Hampton Roads region, and only community colleges in that region can offer the programs. In addition, certain CTE credit programs provide skills needed in the economy but not necessarily in the magnitude of those on the high demand occupation list (e.g., athletic trainers).

Though alignment varies by region, CTE credit and FastForward program enrollment is also generally aligned with high demand occupations in each region (Figure 3-2).

GO Virginia regions are used as the regional designation because the localities that make up each of the regions share similar economic development and workforce needs and are geographically similar. Some community college service areas include localities in two GO Virginia regions. In these cases, JLARC staff assigned the community college to the region where it served the highest number of localities.

FIGURE 3-2
Most CTE credit and FastForward enrollment across GO Virginia regions is in programs matching statewide high demand occupations



SOURCE: JLARC staff comparison of VCCS community college enrollment in 2023–24 by CIP program and the high demand occupation list, using the CIP-SOC crosswalk.
NOTE: The percentage in GO Region 6 is lower than other regions because the FastForward highway and road construction program (which does not directly match an occupation code) is offered only in this region (by Germanna Community College) and serves the entire state.

Percentages of CTE credit enrollment matching a statewide high demand occupation range from 70 percent in GO Virginia region 4 (Richmond-Crater region) to 85 percent in region 6 (Fredericksburg-Bay region). Percentages of FastForward enrollment matching a high demand occupation range from 51 percent in GO Virginia region 6 to 97 percent or more in three GO Virginia regions (2-Near Southwest, 7-Northern Virginia, and 8-Piedmont-Charlottesville). The regions with lower percentages are regions where business administration CTE credit programs (GO Virginia region 4) and the FastForward highway and road construction program (GO Virginia region 6) make up a high percentage of enrollment. These occupations do not directly match occupations on the high demand occupation list, but as noted above, are in high demand.

The general alignment with high demand jobs has occurred for multiple reasons. VCCS policy states that CTE credit courses are to be designed primarily to meet the needs of workers in the region, and the creation of two programs over the last decade are specifically designed to encourage alignment with the state's high demand occupations.

VCCS and community colleges developed **FastForward** programs to apply Workforce Credential Grant funding. FastForward courses are short-term non-credit courses that lead to an industry credential. Students can participate in FastForward programs even if they do not receive grant funding. This occurs if they are nonresidents of Virginia or grant funding is depleted.

- **New Economy Workforce Credential Grant (WCG) Program** (adopted in 2016). Intended to close the skills gap for middle skill workers by creating a supply of credentialed workers for high-demand occupations. This grant reduces student costs of non-credit programs for high demand occupations by covering one-third of the program's cost upon completion and another one-third upon credential receipt. Students pay only the first one-third of the cost at time of enrollment. FastForward non-credit programs were created to use this grant fund (sidebar).
- **Get Skilled, Get a Job, Get Ahead** or G3 (adopted in 2021). Provides "last dollar" tuition assistance to eligible Virginians in a community college program to prepare them for careers in specific high demand areas (i.e., health care, information technology, manufacturing, skilled trades, public safety, and early childhood education). G3 funds can be used only to cover the cost of tuition for CTE credit programs and the student portion of FastForward programs that are in the specified high demand areas.

For FastForward programs specifically, each college is responsible for ensuring the courses offered align with either statewide or regionally high demand occupations. A college cannot offer a FastForward program if it does not align with the state's high demand occupation list or does not align with a high demand occupation in the region. Colleges use the Virginia Office of Education Economics (VOEE) list of high demand occupations in Virginia, other corroborating data sources, and letters of support from businesses to document the occupation is in high demand in their region.

VCCS policy also requires that FastForward programs must lead to credentials that are:

- competency based and indicative of possessing technical and occupational skills necessary for the occupation;
- issued by a third party (e.g., Board of Nursing, American Welding Society, etc.) to assure relevance in the workplace; and
- portable and recognized by multiple employers and educational institutions across Virginia (or nationwide).

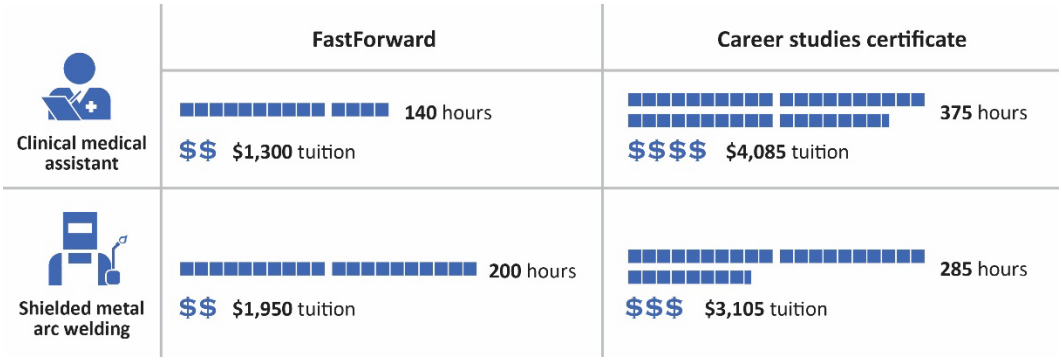
CTE enrollment is shifting to shorter-term credential programs like FastForward

One of the major changes to the higher education landscape has been growing interest in short-term, skill-based credentials. This change is reflected in the growing proportion of CTE students enrolling in short-term FastForward courses. FastForward enrollment was 20,403 in FY25, and the proportion of CTE students in FastForward courses has more than doubled since FY18 (13 percent vs. 27 percent). A recent national survey of people considering education choices found two-thirds of respondents prefer a non-degree pathway similar to FastForward. The shift to FastForward programs also furthers the statutory goal for community colleges to maximize non-credit course offerings to meet workforce needs.

Students may prefer a FastForward program rather than a similar credit program because FastForward programs are typically shorter in duration than their credit counterparts, and they are often cheaper (unless the student receives financial aid) (Figure 3-3). This means that FastForward programs allow the student to begin recouping program costs through employment more quickly. Older students, who may already be in the workforce, enroll in FastForward programs at higher rates than similar credit programs, likely because of these features.

Colleges may also prefer to offer programs through FastForward rather than a similar credit program because FastForward programs are easier to establish and discontinue, making them more responsive to changing workforce demand. All CTE programs (and academic transfer programs) must be reviewed and approved by the community college administration and board. However, credit programs must undergo several layers of review and approval by the VCCS staff and board, as well as by the State Council of Higher Education for Virginia (SCHEV) staff and council (except for career studies certificates). In addition, they all must be approved by the entity accrediting the colleges. In contrast, the only state-level review and approval of FastForward programs is the VCCS staff and board. Discontinuing credit programs also takes longer than non-credit programs and requires involving VCCS, SCHEV, and the accrediting entity.

FIGURE 3-3
Students may prefer enrolling in a FastForward program because they are often shorter in duration and are cheaper than similar credit programs



SOURCE: Review of program curriculum and descriptions on community college websites.
NOTE: Tuition costs represent the cost paid by students. For FastForward programs, tuition represents the portion of tuition student is responsible for if they complete the program (one-third of cost of program). For both FastForward and career studies certificates, tuition costs for which the student is responsible may be lower than what is represented here if the student qualifies for additional financial aid (Pell Grant for career studies certificates, or G3 for either type of program).

The flexibility of the FastForward program gives community colleges a greater ability to prioritize programs that can meet unmet demands, as required by statute. Because they can quickly start and stop programs based on employer needs, colleges can more quickly stand up a new program when employers request one, stop offering it if demand ceases, and redirect funds to other new or existing programs. Staff from several community colleges confirmed this flexibility, noting they can more easily resume courses later if employer demand increases again.

VCCS intended to expand the FastForward program offerings and enrollment as indicated by submission of a decision package for inclusion in the governor's 2024 budget recommendation for $136 million to expand both credit and non-credit CTE programs at the community colleges. VCCS also requested an additional $8.5 million in last year's budget cycle for additional WCG funds to increase funding for additional FastForward students. These requests were not included in the final budget.

Completion rates in Virginia compared with other states. Three-year graduation rates for CTE and academic transfer credit programs in Virginia (30 percent) are similar to those in other states in the region (South Carolina, North Carolina, West Virginia, and Maryland), according to the Richmond Federal Reserve.

FastForward students tend to have positive outcomes, at least in the short term

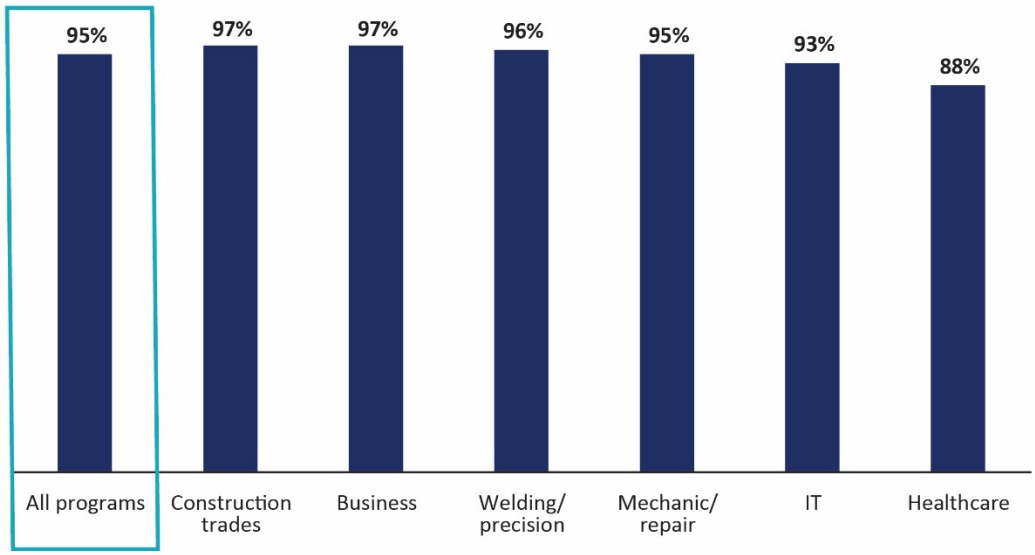
Positive outcomes for CTE students, such as completing CTE programs and securing gainful employment, benefit students, employers, and the state. Understanding the outcomes of FastForward participants is particularly important because the program is state funded and has expanded since inception. Identifying any needed improvements is important because VCCS has expressed interest in continuing to expand the breadth and enrollment in the FastForward program (sidebar).

Nearly all students complete FastForward programs

Nearly all (95 percent) enrollees in FastForward programs complete the program, according to an analysis of FastForward data (sidebar, Figure 3-4). Factors contributing to high FastForward completion rates include students' financial incentive to complete the program (otherwise they must pay an additional one-third of the program cost), and the program's relatively short duration. FastForward programs have substantially higher completion rates than typical credit CTE programs (22 percent for VCCS CTE

credit programs in 2023–24) and noncredit programs in other states (75 percent based on research of other states).

FIGURE 3-4
FastForward programs have high completion rates



SOURCE: JLARC analysis of FastForward completion rates for FY24 at the two-digit CIP level.

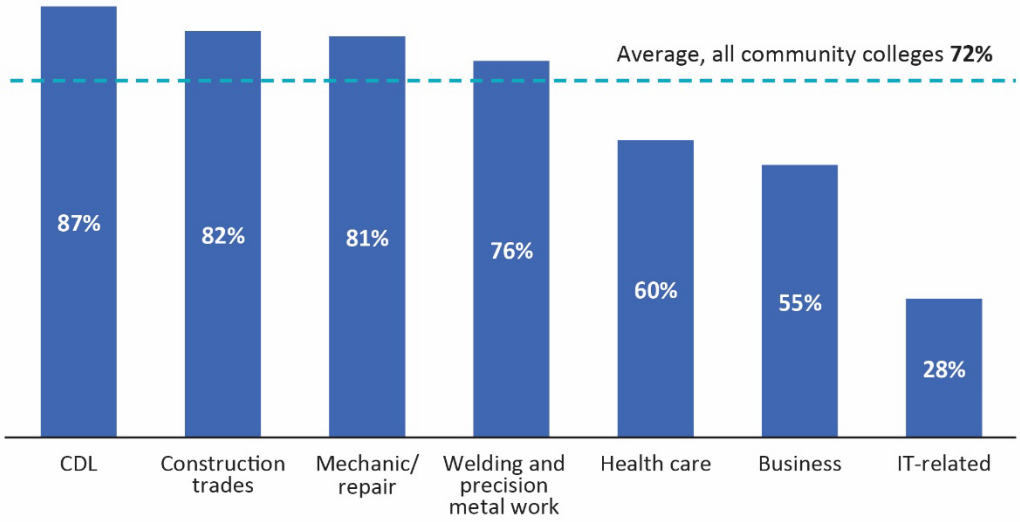
Majority of FastForward program completers obtained a credential, and the credential rate, while increasing, varies by program

About 72 percent of FastForward participants report obtaining their credential after program completion in FY24, but the credential rate varies substantially by program (Figure 3-5). The credential rate for FastForward programs matters because credentials are industry recognized (a program requirement) and because the college receives the final third of the tuition upon receipt of a reported credential. Even though colleges encourage students to report credential receipt, these credential rates may be lower than actual credential rates because some students probably do not report their credentials to the colleges.

Credential rates are high for some programs because participants *must* earn the credential to work in the field (e.g., CDL programs) or because the program area has multiple levels of credentials, and the participant must receive a lower-level credential before entering the program to earn the higher-level credential (e.g., construction trades) (sidebar). Credential rates are typically lower for programs for which a credential is not needed to get a job in the field, or because of barriers to obtaining the credential. Colleges report that some programs have a delay between their end date and the date of the credential test, which may contribute to lower rates of credential attainment. For IT-related programs, colleges report that the credential test is difficult to pass and is not necessarily required to work in the field.

Participants must earn the lower-level credential in some program areas to move on to the next level credential. For example, one needs to receive the credential in NCCER Introductory Craft Skills before continuing in a program to receive a level 1 credential for carpentry, electricity, or welding. Similarly, the Measurement, Materials & Safety and Job Planning, Benchwork & Layout credentials are prerequisites for the CNC Milling Fundamentals I program to become an entry-level machinist.

FIGURE 3-5
Almost three-fourths of FastForward participants obtain a credential, but rates vary by program



SOURCE: JLARC analysis of VCCS FastForward credential rates for FY24.
NOTE: Construction trades includes highway and road construction and construction trades, general. Both have credential rates of about 82 percent each.

The majority of individual community colleges have relatively high credential rates. Thirteen of the 23 colleges had credential rates near or above the statewide credential rate (72 percent) for 2024, with several colleges in the southwestern part of the state having particularly high rates. Mountain Empire, Southwest Virginia, Virginia Highlands, Virginia Western, and Wytheville had credential rates of 86 percent to 90 percent.

FastForward credential rates have increased over time, overall and particularly at some community colleges. The credential rate across all community colleges has increased 8 percent since 2018, and 16 colleges have experienced increasing rates. Several colleges have experienced substantial increases in credential rates since 2018, including Southwest Virginia (96 percent increase), Virginia Highlands (82 percent increase), Northern Virginia (59 percent increase), and Virginia Peninsula (49 percent increase).

Some colleges that have experienced rate increases, or have had consistently high credential rates, appear to have achieved those rates at least partially because they have adopted certain practices. For example, Laurel Ridge Community College staff indicate that they try to schedule the credential test on the last day of class, which staff reports has contributed to relatively high credential rates over time (rates have ranged between 80 percent and 87 percent since 2018).

VCCS indicates that **colleges embed the cost of the credential exam in FastForward tuition** to minimize the credential exam fee as a barrier for students attaining the credential.

Increasing the credential rate to 75 percent by 2030 is one of VCCS's strategic plan goals. To help accomplish this, VCCS staff are planning to pilot certain strategies at colleges to help improve credential rates. One of the programs included in the pilot

will be IT, which has a 28 percent credential rate statewide. The pilot program will replicate strategies used by Laurel Ridge's IT program at other community college IT programs across the state. Over 70 percent of students who complete Laurel Ridge's IT program successfully earn the credential (sidebar). Some of Laurel Ridge's strategies to improve pass rates for its programs include incorporating test preparation in course sessions and scheduling courses to end around the same time as the credential exam. These strategies could also be expanded to other programs with lower credential rates, especially in health care where demand is very high.

FastForward IT programs typically prepare students to earn CompTIA certifications. Nationally, these certifications have a first-time pass rate around 70 percent.

FastForward participants experience wage growth, but not all make a living wage

Another key indicator of FastForward program effectiveness is whether participants are employed and earning higher wages after program completion. This section focuses on wage growth rather than employment because available employment data does not indicate whether program completers obtain a job aligned with their training program. In addition, available data indicates employment rates do not substantially increase post-completion because the majority of participants were employed prior to enrolling in FastForward.

Completion of FastForward programs and obtaining a credential led to initial annual wage gains of about $10,800, 12 months after program completion. Wage gains for FastForward participants vary by program, with completers of some programs experiencing substantial gains. For example, FastForward completers earning paramedic and power line worker credentials in FY23 saw median annual wage increases of $30,000 or more. Completers of other programs, like medical billing and coding, who received credentials had relatively small wage gains (median gain of about $1,100). The post-completion median wage for these credential earners ($35,700) was below the median wage for that occupation ($48,500), indicating they are likely earning entry-level wages but could later see wage growth.

The $10,800 in annual wage gains, on average, for FastForward credential earners tends to be lower than wage gains after completing longer duration credit programs. This conclusion is based on comparisons of pre- and post-program wage changes for G3-funded students completing CTE credit programs (median increase of about $21,000). The disparity is partially attributable to credit programs leading to associate degrees, which tend to yield higher wage gains than certificates or noncredit credentials.

Not all FastForward completers earn a living wage

Not all FastForward completers earned incomes considered to be a living wage immediately after completing the program. Though not a statutory goal for the program, the VCCS website for the FastForward program states: "Our goal is to get you trained, help you earn your certification and get you into a career that can support you and your family." The median wages for FastForward participants a year after receiving their credential was approximately $41,000, which is above a living wage threshold for

The **ALICE (Asset Limited, Income Constrained, Employed) survival budget** is a commonly used living wage threshold, developed by the United Way, which estimates the minimum cost of household necessities plus taxes and a contingency fund. ALICE survival budgets are calculated by state and by individual locality.

Virginia for a household with one adult ($34,200) (sidebar) but below the threshold for a household with one adult and one child ($48,800). A VCCS survey revealed that approximately 58 percent of FastForward completers have one or more dependent. This suggests that some FastForward completers may not be earning enough to cover their household's minimum expenses, particularly in high-cost areas, though the household could have another wage earner. A majority of FastForward completers responding to the VCCS survey reported satisfaction with their wage after completion (see sidebar).

Some FastForward completers' wages, though, surpass the living wage threshold for a household with one adult and one child. For more than 50 FastForward programs offered across community colleges (representing nearly 7,000 enrollees in FY23), the median wages for credential earners were $50,000 or more 12 months after program completion. Two IT-related programs (Intro to PLC programming and AWS certified architect solutions) reported median wages for program completers of over $100,000.

Seventy-two percent of FastForward completers responding to a **VCCS survey** reported satisfaction with their wage after program completion. The percentage was slightly higher for those also obtaining a credential (74 percent). In comparison, the percentage satisfied with their wage prior to the FastForward program was approximately 21 percentage points lower for both completers and credential earners.

Longer-term wage gains for FastForward participants are unknown, but some occupations could have long-term wage growth

Whether FastForward participants continue to experience wage gains over time is unknown. One of the benefits of CTE credit programs, particularly applied associate degrees, is that wage gains continue in the long term for community college students who earn associate degrees, according to research. Very limited research, though, has been conducted for noncredit students, and data on wage outcomes for FastForward participants is limited to one year to 18 months post-completion.

FastForward programs are designed to prepare participants for entry-level positions, so many program participants are likely earning entry-level wages. However, many FastForward participants are in occupations that have the potential for substantial wage growth over time. A majority of the occupational categories (90 of the 157) that align with FastForward programs demonstrate substantial wage growth potential (i.e., occupation wages at the 75th percentile are at least 150 percent higher than wages at the 25th percentile), including truck drivers, carpenters, plumbers, autobody repair technicians, clinical laboratory technicians, and cardiovascular technicians. This analysis of FastForward program completers' wages to overall wages for certain occupations suggests that FastForward credential earners' wages may increase over time.

Some occupations, though, that align with FastForward programs may not have substantial wage growth potential. The entry-level wage (25th percentile wage) for some occupations like electricians and industrial machinery mechanics is relatively high (approximately $47,000 and near the living wage threshold for a household of one adult and one child). Though wages for more experienced workers (75th percentile wage) are about $20,000 more, the percentage difference is relatively lower. Other occupations are lower wage in general but are still in high demand fields. Clinical medical assistants are in very high demand (nearly 3,000 annual openings per year), but the

entry-level wage is low ($35,000), and the difference in wages between entry-level and experienced workers is relatively small ($9,400 or 27 percent).

FastForward credentials are often stackable, but stacking rates are low

VCCS policy states that where possible, FastForward credentials should be part of a career pathways framework and be stackable, leading to a higher-level industry-recognized credential or a postsecondary degree (sidebar). Research indicates stacking credentials increases employment and wages because participants acquire new skills to advance to higher paid occupations. For example, a person who completed a certified nursing assistant (CNA) FastForward program and received a CNA certification can use that certification as credit toward a degree in practical or registered nursing. Related FastForward credentials can also be stacked together, leading to career advancement and wage growth.

Stackable credentials are a sequence of credentials like certificates, micro-credentials, or FastForward industry credentials that can be earned incrementally and combined to build toward a larger goal, such as an associate or bachelor's degree.

Despite the potential benefits, the percentage of FastForward participants who stack their FastForward credentials is relatively low. A prior study found that less than 14 percent of FastForward students later pursue credit courses, and VCCS staff reported that 22 percent of FastForward participants from the start of the program through FY24 have earned multiple FastForward credentials.

Some individual community colleges are adopting new practices to encourage stacking. For example, colleges are bundling FastForward credentials into packages to encourage participants to earn multiple related credentials to broaden their career opportunities. For example, Paul D. Camp Community College has developed a Fast-Track Health Care program through which participants can earn three different health-care credentials (such as certified medical assistant, phlebotomist, and EKG technician) in five months, quickly preparing an individual with the skills to work in a variety of health-care settings. In addition, Brightpoint Community College has developed a web-based career pathway visualization tool to show how stacking the credentials from available Brightpoint programs (FastForward and credit programs) can lead to career advancement and higher wages in the manufacturing sector (sidebar).

Brightpoint's career pathway visualization tool shows how a person can start and advance in manufacturing by: (1) earning a manufacturing technician FastForward credential that provides the skills to qualify as a maintenance helper position at a manufacturing facility (salary of $25,000 to $31,000); (2) applying the FastForward credential toward earning a career studies certificate in mechanical maintenance to advance to an industrial mechanic position (salary up to $40,000 initially or $67,000 as a senior mechanic); and (3) applying the certificate toward an applied associate in technical studies to advance to a maintenance supervisor or manager (salary of $73,000 to $85,000).

FastForward faces potential funding challenges and could benefit from improved program information

The FastForward program appears to offer a promising, cost-effective way to help build the skilled workforce needed to meet employer demand. The program has experienced strong student demand, as shown by continuing enrollment growth, and has had consistently high completion rates. Credential rates, though lower than completion rates, have increased over time, and those that completed the program experience positive wage growth at least initially.

Moving forward, the program may face funding challenges because demand for the program exceeds available funding. Collecting better data about the program will be

helpful so it can be improved over time, especially if the program continues to expand in the future.

Opportunities exist to expand FastForward, but funding is currently constrained

Enrollment in FastForward programs has more than doubled since FY18, but despite this rapid growth (and growth in CTE credit program enrollment), workforce shortages still exist based on a comparison of program enrollment to annual average job openings. For example, FastForward enrollment was approximately 17,400 in FY24, far less than the 182,400 job openings projected to occur that year for high demand occupations that align with FastForward programs.

FastForward's growth is likely to plateau in FY26 because of funding constraints on the Workforce Credential Grant (WCG), which funds most students enrolled in FastForward programs. WCG appropriations for FastForward have increased over time, starting with a $5 million appropriation in FY17 and growing to $23.8 million in FY26. VCCS staff expect the program to use the full FY26 appropriation before the end of that fiscal year unless the colleges manage their enrollment.

VCCS and the community colleges are looking for other federal or local community funding sources to help meet demand for FastForward tuition assistance. However, VCCS still expects FastForward enrollment to plateau or decline in FY26 because of funding constraints.

New federal funding may be available for short-term non-credit programs beginning in 2027. Currently, short-term non-credit CTE programs like FastForward are not eligible for federal student financial assistance, particularly Pell Grants. Most students enrolling in FastForward courses through VCCS pay for their tuition through the state-funded WCG fund. However, the recent federal budget includes provisions to allow Pell Grants to be used for short-term (at least eight weeks and 150 hours) workforce programs that lead to a recognized credential. Short-term workforce programs will be eligible for Pell Grants, but to allow time for the development of federal regulations, Pell Grants may not be able to be used until FY27.

According to VCCS and community college staff, FastForward programs typically would not meet the 150-hour requirement. However, Virginia stakeholders are participating in the regulatory process, and it is possible rules can be tailored to enable the use of Pell Grants for FastForward tuition. Pell Grant funding would provide a significant new funding source for the FastForward program. Depending on the federal rules that are adopted, adjustments may be necessary to FastForward programs to qualify for the funding.

To the extent that new funding (state or federal) becomes available, focusing on programs that are not currently available but would prepare individuals for occupations with a high number of available jobs would seem prudent. Approximately 30 FastForward programs that match occupations on the state's high demand occupation list have

low program availability, and for some the gap between enrollment in programs and job openings is substantial (Table 3-1). Lack of program availability can be the result of resource constraints (such as lack of available space and faculty who can often earn more in the private sector), high capital costs for specialized equipment, and certification requirements that may dictate faculty-to-student ratios, faculty qualifications, and clinical and other program requirements. Colleges reported not always being able to meet student demand. For example, Southwest Virginia reports students may have to wait until the next course is available because classes fill up quickly.

TABLE 3-1
Several FastForward programs are aligned with occupations that have high numbers of job openings but very low program availability and enrollment

Example programs	FastForward Enrollees	Annual number of job openings
Cloud computing	109	9,634
Human resource management	174	7,025
Plumbing	143	4,045
Masonry	16	2,783
Industrial mechanics and maintenance	204	1,630

SOURCE: JLARC analysis of VCCS FastForward enrollment for FY24, and Virginia Office of Education Economics High Demand Occupations Dashboard.

VCCS should collect additional information to continue to refine and improve the FastForward program

While the FastForward program appears generally effective, gaps still exist in what is known about the program's outcomes. If the program grows, it will be important to fully understand how the program can be adjusted over time to make it even more effective. More information is needed, particularly from the employer perspective, because the Code of Virginia emphasizes the program should meet employer needs. More information also is needed about the student perspective. Key questions that need to be answered include:

- Do employers hire program participants into occupations for which they received training, and are these participants retained beyond any probationary periods and for at least one to two years?
- Are the credentials attained by FastForward participants typically desired by employers, especially since some disciplines have multiple industry credentialing bodies and awards? (sidebar)
- What strategies can colleges use to increase credential rates for FastForward programs, specifically programs with lower-than-average rates?
- To what extent are FastForward participants stacking their credentials, and does this help them to advance their careers and increase their earnings?

FastForward programs typically train students based on the curriculum for a particular credential. For example, many FastForward welding programs train students for an American Welding Society (AWS) certification exam. However, other organizations offer welding credentials, such as the National Center for Construction Education and Research (NCCER) and American Society of Mechanical Engineers (ASME). These other certifications may offer other or additional skills.

- Do participants' wages grow over a longer time horizon?

These questions could potentially be answered periodically through several methods including:

- **Employer survey**. The VCCS system office, with assistance from the community colleges, could survey businesses that have hired a sizable percentage of FastForward completers, (identified from further analysis of Virginia Employment Commission employment and wage records and input from community colleges). The survey could ask how well FastForward completers are prepared for their related job and the usefulness of their credentials.
- **FastForward completer survey**. The current VCCS survey of FastForward completers could be refined so that completers identify the field in which they were trained so that results could be analyzed by occupational area.
- **VCCS administrative data analysis**. VCCS could perform further analysis of CTE credit and FastForward enrollment and completion data to identify the percentage of FastForward completers who attain additional credentials (credit or FastForward) over time in the same or related occupational fields.
- **VEC employment and wage record analysis**. SCHEV, with assistance from VCCS, already analyzes and reports employment and wage outcomes for FastForward completers 12 months after they receive a credential. SCHEV could expand its FastForward wage gains analysis to at least three- or five-years post credential to better understand if wage gains persist over time.

As part of the information collection process, VCCS could also work with business stakeholders to determine if additional opportunities exist to collaborate with companies (particularly larger companies) to help address high capital costs of establishing some FastForward programs and develop additional strategies to encourage students to stack credentials.

RECOMMENDATION 5

The Virginia Community College System should identify opportunities to improve the FastForward program by further evaluating whether (i) FastForward completers obtain and keep jobs in the occupational field for which they were trained, (ii) the credentials attained by FastForward completers are desired by employers, (iii) additional strategies can be used to achieve higher student credential rates, (iv) FastForward participants are stacking their credentials and thereby increasing their wages; and (v) wages increase three and five years after program completion.

4 Dual Enrollment

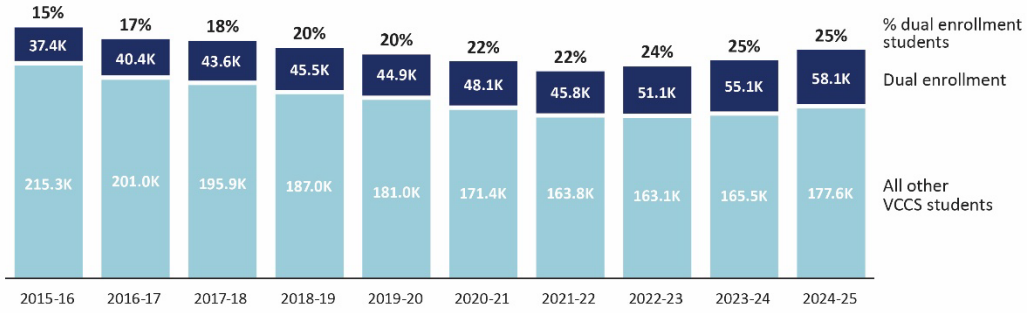
Dual enrollment programs allow high school students to earn both high school and college credits by taking college-level courses, primarily at their high school or a community college. Students who complete dual enrollment courses successfully with a grade of "C" or better receive both high school and college credit for the course (sidebar). Most dual enrollment courses are in general education subjects (e.g., math, English, history) and are intended for transfer to a four-year institution. A minority of dual enrollment courses are in CTE subjects (e.g., welding, nursing, automotive). CTE courses are generally not taken to transfer credit to a four-year institution.

Dual enrollment students have been the fastest-growing segment of VCCS's enrollment and now make up about a quarter of total VCCS enrollment. Between 2015–16 and 2024–25, the number of dual enrollment students grew 55 percent (from 37,400 students to 58,100). Over the 10-year period, dual enrollment's proportion of total enrollment at VCCS increased from 15 percent to 25 percent (Figure 4-1). Dual enrollment student enrollment, unlike enrollment of other types of students, grew relatively consistently throughout the decade.

Successful transfer of dual enrollment courses to four-year institutions was not evaluated in this report. However, SCHEV reports that **all Virginia public four-year institutions are accepting UCGS and Passport courses for credit**, and when the programs are completed, they satisfy some or most general education requirements.

JLARC staff interviewed staff at three of the state's four-year institutions (VCU, ODU, and Virginia Tech) about transfer of UCGS and Passport courses, and each reported that they accept these courses for credit and to satisfy general education requirements.

FIGURE 4-1
Dual enrollment students were one-quarter of VCCS's enrollment in 2024–25



SOURCE: JLARC staff analysis of VCCS annual headcount enrollment by program data, 2015–16 to 2024–25.
NOTE: Enrollment represents total headcount for each institution, which includes full-time and part-time students. Enrollment figures include dual enrollment and FastForward students.

Legislative priorities related to dual enrollment have focused on two main areas: clarifying how students can use dual enrollment to earn credits that transfer to a four-year institution and increasing student participation in these courses. In 2018, legislation required the development of the Uniform Certificate of General Studies (UCGS) and Passport programs, to ensure that dual enrollment courses transfer to a public four-year institution. UCGS consists of ten college-level courses that are

transferable and satisfy a general education requirement at any Virginia public four-year institution. Passport is a five-course college program that contains a subset of courses in the UCGS and helps students satisfy some general education requirements. The 2024 General Assembly created the College and Career Ready Virginia (CCRV) program, which will make UCGS/Passport dual enrollment courses free to students and expand the availability of these courses.

This chapter provides a status report about dual enrollment, specifically in the context of the recently passed CCRV.

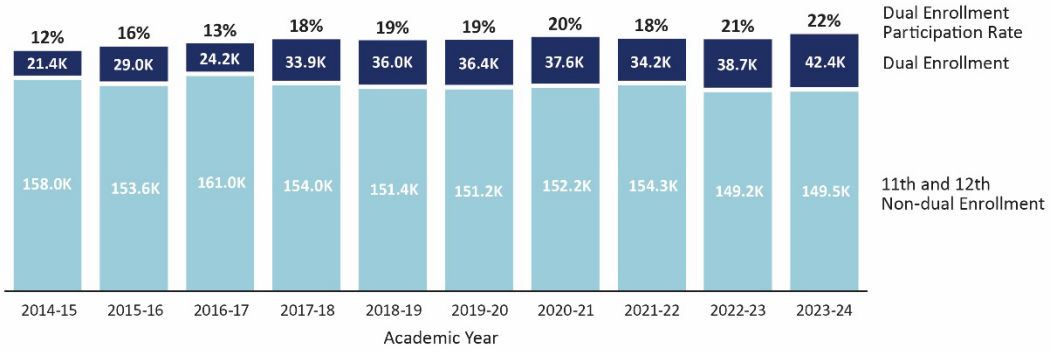
Dual enrollment participation has increased to more than one-fifth of high school juniors and seniors

In recent years, Virginia Department of Education data (VDOE) data shows about one-fifth of all 11th and 12th grade students have taken at least one dual enrollment course annually. The percentage of 11th and 12th grade students participating in dual enrollment grew from 12 percent in 2014–15 to 22 percent in 2023–24 (sidebar). Participation growth plateaued during the years surrounding the pandemic and increased more slowly since 2022–23 (Figure 4-2). Ultimately, approximately one-third of high school graduates will have taken any dual enrollment courses while they were in high school.

VCCS reports more dual enrollment students than VDOE and school divisions report. This variation is likely due to dual enrollment students from private schools, home school, and some governor's schools and academies not being included in VDOE's data. Additionally, VCCS data includes a small amount of duplication because students who take dual enrollment courses through two or more colleges are counted once for each college.

This report typically uses VCCS's reported dual enrollment figures throughout and notes when VDOE's figures are used.

FIGURE 4-2
Dual enrollment students grew as a proportion of high school juniors and seniors



SOURCE: JLARC staff analysis of VDOE Advanced Program Participation and Fall Membership data, 2014–15 through 2023–24.
NOTE: Participation rate is the percentage of 11th and 12th grade high school students taking at least one dual enrollment course in that academic year as reported by VDOE and is not the number of students reported by VCCS.

Dual enrollment growth has varied by school division, with much of the recent growth in several very large divisions. Ten school divisions were responsible for 60 percent of the state's dual enrollment growth between 2021–22 and 2023–24: Albemarle,

Chesapeake, Chesterfield, Fairfax, Hampton, Henrico, Loudoun, Prince William, Stafford, and York.

The percentage of students enrolled in dual enrollment courses varies by division. Approximately 55 percent of divisions enroll about one-quarter of their eligible students in dual enrollment. Most of these school divisions, 68 out of 71, were small school divisions with under 2,000 eligible students in 2023–24. Enrollment was as low as 5 percent or less in nine divisions and as high as 60 percent or more in eight divisions.

Most dual enrollment participants take few classes and very few earn a credential

Approximately two-thirds of high school graduates have not taken any dual enrollment courses. The remaining students who take at least one dual enrollment course may do so for a variety of reasons. Many dual enrollment students do not wish to complete Passport, UCGS, or a credential before graduation, but instead take one or more dual enrollment courses to earn some college credits, strengthen their college applications, or experience a college course (sidebar). A State Council of Higher Education for Virginia (SCHEV) survey of Virginia college students who took dual enrollment during high school found that half wished to save time and money on their four-year degree, and the remaining students had other goals, such as exploring college coursework or gaining admission to a specific college.

Over 40 percent of dual enrollment students took one or two courses

Approximately 43 percent of *dual enrollment* students who graduated from high school in 2024 took one or two dual enrollment courses (Table 4-1). About 30 percent of dual enrollment students who graduated from high school in 2024 took three to five dual enrollment courses. Students who took any dual enrollment courses during high school accounted for between 27 and 36 percent of high school graduates in that year. Although data was not available on the total number of 2025 high school graduates as of the time of this report's writing, similar numbers of presumed 2025 high school graduates took dual enrollment courses in high school.

UCGS requires students to take 10 courses (30 to 32 credits) in seven disciplinary blocks:

1. written communication;
2. humanities, arts, and literature;
3. social and behavioral science;
4. natural sciences;
5. math;
6. history; and
7. specialized general education courses.

Passport requires students to take five courses (16 credits) in five disciplinary blocks. Passport allows students to choose one course from block 2 or 6 and excludes block 7.

TABLE 4-1
Almost half of dual enrollment students who graduated in 2024 took one to two dual enrollment courses

Graduating dual enrollment students who took…	# students	% dual enrollment students	Estimated % all high school graduates
1 to 2 courses	14,494	43%	12-15%
3 to 5 courses	9,997	30	8-11
6 to 9 courses	4,987	15	4-5
10 or more courses	4,026	12	3-4
2024 graduates who took any dual enrollment courses	33,504	100%	27-36%

SOURCE: JLARC staff analysis of VCCS student, class, course, and graduation data for high school students graduating in 2024.
NOTE: Represents cohorts of students who graduated from high school in 2024 and had taken at least one dual enrollment course during high school. Does not represent exact total of dual enrollment students in the graduating year cohort because some students are excluded when courses were not for credit or did not report a grade.

Small percentage of dual enrollment students, and even smaller percentage of all high school graduates, complete a credential

VCCS does not technically consider **Passport** a credential, but rather a program that students can complete. For this analysis, JLARC staff treated Passport as a credential.

A small proportion of dual enrollment students are currently completing any credentials, including UCGS, Passport, or another VCCS credential. Approximately 9 percent of dual enrolled students graduating in 2024 completed any credential (Table 4-2). A VCCS credential could include UCGS, Passport, an associate degree, an applied associate degree, a career studies certificate, certificate, or diploma (sidebar). Just 4 and 2 percent of dual enrolled students graduating in 2024 completed and earned the UCGS or Passport, respectively.

TABLE 4-2
Small proportion of students complete any VCCS credential before graduation

Graduating dual enrollment students who…	# students	% participating students	Estimated % <u>all</u> high school graduates
…earned any VCCS credential (including Passport and UCGS)	3,034	9%	2.0–3.0%
…earned UCGS [a]	1,252	4	1.0–1.3%
…completed only Passport	626	2	0.6–0.8%

SOURCE: JLARC staff analysis of VCCS student, class, course, and graduation data for high school students graduating in 2024.
NOTE: Represents cohorts of students who graduated from high school in 2024 and had taken at least one dual enrollment course during high school. Does not include non-VCCS students who take dual enrollment at a four-year institution. [a] Students who complete the UCGS are assumed to have completed the Passport, except in very rare circumstances.

Overall, about one-third of high school graduates took any dual enrollment courses during their high school career, and a very small proportion earned a credential

through dual enrollment. Between 27 and 36 percent of high school graduates in 2024 took at least one dual enrollment course at any point during their high school career (sidebar). Between 2 and 3 percent of all public high school 2024 graduates earned any VCCS credential (including UCGS or Passport) through dual enrollment.

These figures are estimates of the percentage of public high school graduates taking dual enrollment based on VDOE's reports of the number of high school graduates and dual enrollment, and VCCS's data on dual enrollment by graduation year.

Level of future increase in dual enrollment participation is unclear

Many more students than those who participate are *eligible* to participate in dual enrollment courses. According to data collected from school divisions for this study (sidebar), approximately 62 percent of high school students statewide have a 3.0 grade point average and could qualify to take dual enrollment classes, which is substantially more than the one-third reported above who have taken at least one course (sidebar).

JLARC staff collected information from school divisions about dual enrollment staffing, student eligibility, and program capacity via a data collection instrument. A total of 93 school divisions provided information through this instrument.

This substantial difference between student *eligibility* and student *interest* makes it challenging to plan for how much additional dual enrollment capacity may be needed to meet student demand in the future. If all eligible high school students participated in dual enrollment, the number of eligible dual enrollment students would increase by between 75 and 115 percent. One potential indicator of the level of additional interest would be how many students want to participate but cannot because courses are full or not available. About three-fourths of divisions reported having no students on waitlists, while the remaining one-fourth of divisions did. Using waitlists to measure demand or interest, though, has limitations. For example, waitlists would not indicate whether a student wanted to take a course that was not offered.

Experience in other states suggests there may not be substantially more additional demand for dual enrollment in the future. Other states that offer tuition-free dual enrollment courses have similar participation rates to Virginia. In other states that offer some form of free dual enrollment, almost one-third of high school graduates participate in dual enrollment. For example, Kentucky offers a scholarship for dual enrollment, and 34 percent of 2022 graduates took at least one dual enrollment course. North Carolina also offers a scholarship for dual enrollment, and 36 percent of 2023–24 graduates took at least one dual enrollment course while in high school. These programs include free tuition for CTE courses, which CCRV does not currently require.

These figures **are estimates of the percentage of public high school graduates taking dual enrollment at some point in their high school career** based on VDOE's reports of the number of high school graduates and dual enrollment, and VCCS's data on dual enrollment by graduation year. A range is provided because these two data sources cannot be exactly matched to determine the actual number of dual enrollment graduates in each public school graduation cohort.

Several factors could limit level of additional participation in dual enrollment

Several student factors could temper future dual enrollment growth. Lack of preparation and demonstrated academic performance, alternative advanced course options, competing interests, and a modest pending decline in high school student population may in combination continue to limit the number of students who enroll in dual enrollment courses.

The Advanced Placement (AP) and International Baccalaureate (IB) programs offer rigorous, college-level courses taught by high school faculty that count toward high school graduation requirements. In both programs, a student must achieve a specific score on the end of course exam to earn college credit for the higher education institution they attend. Each college may have a different cut-score for successful credit transfer for each subject exam.

Cambridge Advanced International Certificate of Education (AICE) is an additional program that offers rigorous, college-level courses taught by high school faculty. VDOE reports that some Virginia school districts, including Prince William County, are beginning to offer these courses as an additional option for students to earn college credit in high school.

Learning loss from the COVID-19 pandemic may continue to reduce the proportion of high school students who are prepared to take dual enrollment classes. Those who are behind academically are less likely to seek advanced level coursework. Learning loss among K–12 students and college students has been widely reported by school division staff, staff at four-year higher education institutions, and staff at community colleges across interviews conducted for JLARC studies over the past four years. Aside from COVID-19 impacts, dual enrollment classes are likely to remain an unsuitable option for many academically average students.

The number of students seeking dual enrollment may also be reduced by other competing options to earn college credit while in high school, such as Advanced Placement (AP) and International Baccalaureate (IB) courses (sidebar). The largest and most recognizable of these programs are AP courses, which have been offered in most high schools for longer than dual enrollment and also provide an opportunity to gain college credit in high school. Most school divisions have more experience offering AP and IB courses compared with dual enrollment, and the teacher credentialing requirements for AP and IB courses are typically easier to fulfill than for dual enrollment. Additionally, because of the longer experience and recognition of AP and IB courses among parents, families, and students, AP and IB courses may be perceived as offering higher quality material and instruction than dual enrollment courses offered through the community colleges (sidebar, next page).

More broadly, high school students have competing interests and commitments that may prevent them from participating in dual enrollment. Many high school juniors and seniors play sports, are involved in extracurricular activities, or have after-school jobs. These other commitments may limit the time available for taking advanced level coursework like dual enrollment, which often can require a larger time commitment than typical high school classes.

Finally, the number of high school students will begin to decline over the next few years, which could slow future dual enrollment growth. The Weldon Cooper Center for Public Service at UVA projects that the number of 11th and 12th grade students enrolled in Virginia public schools will decline an average of 0.6 percent annually between the 2025–26 and 2030–31 academic years. These declines will result in about 5,200 fewer 11th and 12th grade students across the state by the 2030–31 academic year. Even if the percentage of 11th and 12th grade students who participate in dual enrollment continues to increase in future years, the growth will likely be moderated by a shrinking number of total 11th and 12th grade students.

Potential for additional dual enrollment growth varies by division, but all divisions are incentivized through new accountability framework

The CCRV establishes that all qualified students for dual enrollment should have the opportunity to complete the Passport and UCGS, implying that all school divisions must provide access to the courses needed to complete these programs. However,

school divisions vary in available resources (qualified dual enrollment teachers) and potential demand (interested and qualified students) for dual enrollment. Some divisions may be better positioned to offer all courses required for CCRV and expand their programs.

As described earlier, 10 school divisions were responsible for 60 percent of the state's dual enrollment growth between 2021–22 and 2023–24. Despite the rapid growth in dual enrollment in these 10 divisions, six of these divisions still enroll a lower percentage of 11th and 12th grade students in dual enrollment than the statewide average, indicating that dual enrollment could continue to grow in these divisions.

Future dual enrollment growth is also likely to come from these six divisions because most are among the state's largest divisions. If the six high growth divisions with dual enrollment participation below the state average were to increase participation to the statewide average (22 percent), they would add almost 3,500 dual enrollment students. That growth from just these six divisions would result in a 6 percent increase in dual enrollment students statewide (roughly equivalent to the statewide increase annually over the last few years).

Many school divisions may already be enrolling close to the maximum number of students who are both eligible *and* interested in taking dual enrollment courses, so they are unlikely to see much additional future growth. At least 30 percent of students participated in dual enrollment in 45 divisions; more than 50 percent participated in more than 20 divisions (though nearly all these divisions are relatively small). Since these divisions already enroll a larger proportion of their eligible students in dual enrollment than average, these divisions are not likely to have as much additional dual enrollment growth in the future.

Divisions' enrollment differences can result from several factors. School division leadership and high school counselors who emphasize dual enrollment may direct more qualified students and their parents to dual enrollment programs. Larger divisions or high schools may be able to offer more courses because they have a larger teacher pool from which to find teachers qualified or willing to become certified to teach dual enrollment. Finally, some divisions' local population may prefer other advanced coursework (AP or IB) or put less emphasis on advanced coursework entirely.

As of this school year, the state's new K–12 accountability framework will reward schools when more students take and succeed in dual enrollment courses. The School Performance and Support Framework includes a college and career readiness indicator for enrollment, employment, and enlistment (3Es). High schools are awarded points for each student that completes a 3Es achievement, and those points contribute to a school's overall score as a measure of school performance. Dual enrollment is included in the "enrollment" portion of the 3Es, and schools receive points based on students successfully completing courses (sidebar).

Dual enrollment proponents assume that students will "replace" AP courses with dual enrollment. **However, research in Colorado** found that the Concurrent Enrollment Programs Act (2009) that eliminated student costs and established a statewide dual enrollment program did not result in students replacing AP courses with dual enrollment courses. Rather, researchers found that AP and dual enrollment likely serve different student populations.

As Colorado's dual enrollment program grew 55 percent from 2020–2023, the AP participation rate in the state remained around 22 percent each year.

The state's new K-12 accountability framework awards points when students complete dual enrollment courses. Schools are awarded points as follows:

- 0.5 pts for 1 dual enrollment course and earning a "C" grade;
- 0.75 pts for 1 to 2 dual enrollment course(s) and earning a "B" grade;
- 1 pt for 3+ dual enrollment courses and earning a "B" grade; and
- 1.25 pts for earning an associate degree prior to high school graduation.

Shortage of dual enrollment teachers continues to be an impediment

The availability of high school teachers certified to teach dual enrollment courses is a longstanding challenge that still impacts dual enrollment availability and access today. Both the 2017 and 2022 JLARC studies found that a shortage of qualified dual enrollment teachers was the primary limitation on expanding dual enrollment. That dynamic has not changed. Approximately 70 percent of school divisions responding to JLARC's data collection instrument said that a shortage of qualified and willing teachers is still the primary limitation on offering additional dual enrollment courses in the high school.

Credentialing requirements and additional workload deter teachers from teaching dual enrollment courses. To become credentialed, the community colleges' accrediting body generally requires that teachers have a master's degree, including a minimum of 18 graduate-level credit hours in the subject being taught. While many high school teachers have a master's degree, they do not necessarily have the 18 graduate-level credit hours in the discipline they are teaching. Additionally, teaching dual enrollment courses generally requires a greater time commitment than other high school courses because teachers must ensure that course content and delivery is consistent with the courses offered by community college faculty. Community colleges also require that dual enrollment grades be entered using the community college's learning management system (LMS), Canvas, which can be different than the system used by some school divisions.

The state has provided some funding to alleviate the tuition costs for teachers who want to complete graduate-level courses to become qualified to teach dual enrollment, but most awards have been concentrated in a few divisions. The General Assembly has appropriated $250,000 annually for this fund since FY20 and increased the appropriation to $350,000 in FY25. Use of the funds has increased since 2022 when only $36,000 was used; in FY24, $236,000 was awarded to 77 teachers. CCRV directs VCCS and VDOE to work together to develop additional initiatives to provide incentives to teachers to become credentialed for dual enrollment and to teach dual enrollment.

Though the number of vacant teacher positions has recently been declining, the broader teacher shortage exacerbates the shortage of dual enrollment qualified teachers (sidebar). Many divisions have vacancies they need to fill to provide standard, honors, and AP courses without considering dual enrollment. VDOE data indicates that school divisions had just over 600 unfilled teaching positions across English, science, math, and history in the 2024–25 school year (2.3 percent vacancy rate), a slight improvement over the prior two years.

JLARC's 2023 Virginia's K-12 Teacher Pipeline report describes the state's teacher shortage and some options to alleviate it.

CCRV implementation is underway, but additional effort and realistic planning is needed

During this study, VCCS, VDOE, community colleges, and school divisions were in the process of implementing the CCRV legislative requirements. Much of the planning to implement CCRV through February 2025 had been contingent on securing a general fund appropriation for the program, which VCCS did not receive during the 2025 session. Given that it did not receive funding, VCCS indicated it would use a phased approach for implementing CCRV, using five internally staffed workgroups to phase in implementation over the next year (sidebar).

During this initial phase, VCCS will need to apply additional scrutiny to the implementation of widespread virtual learning, incorporation of CTE into CCRV, division-by-division demand for dual enrollment, and planning and coordination.

The five VCCS **workgroups** are each responsible for reviewing and standardizing guidance one of the following topics:

- Policy and instruction
- Course offerings and delivery
- Technology and data
- Marketing and communications
- Systemwide funding and cost

VDOE and VCCS are required to provide **an update on the status of CCRV implementation** to the General Assembly on October 1st, 2025.

Students will no longer be charged tuition and fees to take certain dual enrollment courses

To meet CCRV requirements, VCCS has directed all colleges to eliminate tuition and fee charges for dual enrollment UCGS and Passport courses beginning in fall 2025. Eliminating these tuition charges will meet the requirement to not charge students. (Colleges will still receive prorated state funding through the community college funding formula.)

Some colleges already did not charge for dual enrollment, but the majority had been charging at least some tuition. Many larger community colleges (including Brightpoint, Northern Virginia, Tidewater, and Virginia Peninsula) already offered UCGS and Passport classes on high school campuses and taught by high school faculty free of charge prior to CCRV. However, as of fall 2024, 14 colleges were still charging varying tuition amounts to all dual enrollment students, and these colleges served approximately 35 percent of all dual enrollment students statewide. This change will mean that no students who take UCGS and Passport courses will need to pay tuition starting in 2025–26.

Additional student demand will mostly be met through online courses

To meet CCRV requirements, colleges are working with school divisions to ensure that every qualified student who wants to complete UCGS or Passport will have a pathway to do so, but this will require online courses in many divisions that do not have resources to offer all courses in high schools. CCRV allows VCCS to offer these courses to students virtually.

Some, but not all, school divisions already offered pathways and courses sufficient for students to complete UCGS or Passport, according to existing contracts between community colleges and school divisions for the last academic year (2024–25). JLARC staff reviewed 130 dual enrollment contracts for last academic year and found that seven

school divisions (5 percent) outlined a pathway to complete UCGS using only high school instructors for dual enrollment courses. An additional 91 school divisions (70 percent) had pathways for students to complete UCGS last academic year, but these school divisions needed to use virtual and community college resources to allow students to complete UCGS. The remaining 32 school divisions (25 percent) did not describe a pathway for allowing students to complete UCGS.

The governor's proposed budget for the amended FY25–26 biennium (introduced during the 2025 session) included $35 million in funding to support the CCRV program. These funds were not included in the Appropriation Act.

For the majority of school divisions that did not have high school resources sufficient to offer a pathway for students to complete UCGS, offering virtual courses may have several advantages. Virtual courses make it easier to find faculty because they do not need to be located near a college or high school, avoid the need to transport students to local colleges or other high schools in a division, and allow VCCS to offer a single virtual course to several small divisions. For instances in which VCCS needs to supply the faculty for a dual enrollment course, the college would incur costs for the faculty time.

While offering courses virtually may be an efficient solution to meeting CCRV's requirements, VCCS and VDOE will need to closely monitor course quality and outcomes for dual enrollment students in virtual courses. VCCS system office staff, college staff, and the Virginia Board of Education have all cautioned that online learning may not be appropriate for all high school students who are taking accelerated classes. Additionally, as discussed in Chapter 2 of this report, students are somewhat less likely to be successful in certain online asynchronous courses compared with in-person courses. Appropriately, CCRV requires VCCS and VDOE to develop a plan to collect and report state-level and division-level data on outcomes.

Required planning to incorporate CTE courses into CCRV is ongoing

The CCRV requires VCCS and VDOE to establish a workgroup to develop and recommend an approach to incorporating CTE into the CCRV program. Legislation requires the workgroup to gather data about courses, instructors, and costs, and assess whether CTE dual enrollment courses meet industry needs. The legislation also requires the workgroup to recommend how to incorporate CTE into the CCRV program (including a description of legislative action required to accomplish the recommendations).

Career and Technical Education courses cost more per pupil than academic transfer courses because of material costs related to course instruction. For example, a welding course requires colleges to purchase raw materials students use to learn skills in each class period. In contrast, outside of lab materials for sciences, colleges do not incur expenditures for most academic transfer courses beyond the cost of an FTE teaching position and other standard education delivery costs.

See Chapter 5 for more information about CTE course costs.

Though incorporating CTE would provide additional opportunities for high school students who want to directly enter the workforce after graduation, this effort is still a work in progress. The workgroup, which was convened by the secretary of education in October 2024 to guide CCRV implementation, included some discussion of CTE dual enrollment, but it did not conduct the extensive data collection or issue the detailed recommendations envisioned by the CCRV legislation.

VCCS staff described this work as ongoing and consisting of discussions with community college workforce directors about the dual enrollment CTE courses that are currently offered, could be added to the CCRV, and their cost per pupil (sidebar). This

work is to help identify the extent to which CTE dual enrollment is useful for, available to, and accessible to students statewide. VCCS and VDOE will need to prioritize collecting the data and information required by CCRV and include it in their annual CCRV report to the General Assembly.

Better information and additional coordination are critical to effective CCRV implementation

Given dual enrollment is a statewide policy priority, VCCS and VDOE must coordinate effectively to better understand demand for and school divisions' capacity to offer dual enrollment. This will require close and formal communication between VCCS and VDOE staff.

Though K–12 education and the community college system are technically separate educational systems, CCRV implementation requires effective coordination between them. The challenges achieving this coordination are exemplified by the difficulty even understanding how many students have historically participated in dual enrollment and earned a credential. JLARC staff obtained and merged several different VCCS and VDOE datasets to conduct analysis for this chapter. Staff encountered inconsistencies in the data. For example, VCCS reports over 12,000 more dual enrollment students in academic year 2023-24 than VDOE reports. Although there are likely some valid explanations for this difference, JLARC staff could not resolve the difference because VCCS does not record data on a dual enrollment student's school division, high school, or grade level. Staff also found gaps in critical data, such as whether a student ultimately obtained a credential or completed a post-secondary program, specifically with the Passport program.

Better information would facilitate a more realistic understanding of future demand, which is critical to avoid building unneeded capacity

Uncertainty around future demand for dual enrollment and other factors that may limit dual enrollment growth complicate effectively planning further CCRV implementation. As noted previously, future student demand for dual enrollment is unclear, and there are several factors that will limit its growth at least to some extent. There are also, however, several unimplemented CCRV requirements that may increase student demand or dual enrollment capacity:

- increasing participation from underrepresented groups of students;
- increasing the number of qualified dual enrollment teachers; and
- improving communication and awareness about the availability of dual enrollment.

VCCS and school divisions need to develop a realistic understanding of future demand to best serve interested students and operate efficiently. Creating too much dual enrollment capacity would be inefficient. Time and effort to develop new or additional courses would not be well spent if students are not interested in taking those courses.

Moreover, resources used to create unneeded capacity would impose an unnecessary burden and workload on school divisions, taking time and focus away from other priorities.

Developing a more realistic understanding of future demand will require VCCS to collect and analyze additional information from school divisions. This information could help VCCS and school divisions better understand the pipeline of future 11th and 12th graders interested in and eligible for dual enrollment courses, level of unmet demand among students currently eligible, and other potentially "competing" coursework that could limit future demand. The type of information that would need to be collected and analyzed could include:

- the number of 9th and 10th grade students taking honors courses or advanced math (e.g., students that took Algebra I in 8th grade), who may be more likely to enroll in dual enrollment;
- the number of students on a dual enrollment course waitlist and the course they are waiting to take; and
- the types and number of AP, IB, and Cambridge advanced courses school divisions offer, to better understand the magnitude of alternatives to dual enrollment courses.

Collecting this additional information may represent an extensive effort for VCCS staff because they will need to coordinate with every school division in the state and VDOE. However, collecting this information could help VCCS and the school divisions plan for the appropriate resources needed to comply with CCRV and provide high quality instruction to dual enrollment students.

VCCS lacks dedicated coordinator for dual enrollment and CCRV

VCCS has historically integrated responsibility for dual enrollment into roles with other responsibilities. Academic policy, finance, general administration, and other staff are responsible for coordinating with each other on dual enrollment.

JLARC's 2017 Operations and Performance of the Virginia Community College System report described a similar need for SCHEV to build capacity to analyze transfer students through adding additional full-time staff.

However, with the passage of CCRV, dual enrollment will likely require dedicated staff to focus on certain aspects of dual enrollment. Dedicating one or two staff positions at the system office to dual enrollment would give dedicated staff responsibility for coordinating dual enrollment needs across VCCS's divisions (sidebar). A dedicated staff position would also give the colleges a consistent point person for managing any policy confusion. VCCS should create at least one FTE position to fulfill this role. This new coordinator could also help facilitate coordination between VCCS and VDOE by ensuring consistent and accurate information is available about dual enrollment from each individual college.

RECOMMENDATION 6

The Virginia Community College System should create a new staff position solely dedicated to coordinating dual enrollment within the system and among colleges.

5 Efficiency at VCCS Colleges

Declining enrollment, shifting program enrollment, and upcoming demographic changes necessitate that community colleges operate as efficiently as possible. These ongoing and predicted changes could significantly affect VCCS's spending and revenue. Moreover, given the importance of maintaining affordability and access for students and the substantial amount of state general funds provided to VCCS, the system has a responsibility to operate efficiently. In part because of rising carry forward balances, the analysis in this chapter uses spending rather than appropriations data (sidebar).

VCCS has been directed to resolve its carry forward balances. Colleges have developed plans to spend their carry forward balances. These plans vary across colleges, but include filling vacant positions, spending COVID-era funding yet to be spent, and conducting facility renovation or maintenance.

The system office and individual colleges are aware of the importance of efficiency. For example, since 2017, the state board has assessed individual colleges annually using a four metric framework that includes their costs. The framework identified Eastern Shore in September 2018 for further review (sidebar). This annual exercise is valuable but does not consider efficiency of the system across colleges. VCCS's strategic plan appropriately identifies some of the colleges' efficiency challenges and includes options to react to these changes. For example, the plan acknowledges declining enrollment in traditional academic transfer courses and identifies focusing on workforce development and dual enrollment programs as a strategy to address that decline.

Eastern Shore was subject to a "reboot plan" based on the board's annual assessment. The plan consisted of a variety of strategies, including staff layoffs and temporarily partnering with a larger college for certain administrative tasks.

VCCS also seeks to reduce spending through its shared services center. This includes systemwide procurement, accounts payable, and travel management for all colleges. More broadly, colleges also manage their own budgets, which may require reducing spending. Several colleges have reported taking actions to cut costs and improve efficiency, including laying off staff, eliminating or pausing programs with low enrollment or high costs, and sharing physical space with other community organizations (e.g., housing a lab school in college buildings, allowing the county to use the college library as the county public library).

Small colleges experience efficiency challenges

Some VCCS colleges have very low enrollments that make it more difficult to operate efficiently, especially when responding to declining enrollment. Half of all VCCS colleges have enrollment at or below 2,200 FTEs (Table 5-1, sidebar, next page). These small colleges tend to be in less populated and rural areas of the state. Additionally, these colleges tend to rely more on dual enrollment students for their enrollment, which means a larger proportion of their students are not taking classes on campus and do not pay tuition. VCCS's median size college (Blue Ridge with 2,370 FTEs) is four times larger than VCCS's smallest college (Mountain Gateway with 600 FTEs);

the largest college (Northern Virginia Community College) is over 50 times larger than the smallest college.

TABLE 5-1
Half of VCCS colleges have FTE enrollment under 2,200 students

Colleges below median enrollment	FTEs, 2024–25	% FTEs dual enrollment	Colleges at or above median enrollment	FTEs, 2024–25	% FTEs dual enrollment
Mountain Gateway	600	32%	Blue Ridge	2,370	11%
Eastern Shore	640	32	Central Virginia	2,440	27
Paul D. Camp	840	31	New River	2,620	31
Virginia Highlands	1,380	26	Piedmont Virginia	2,850	24
Mountain Empire	1,480	29	Virginia Western	3,720	21
Wytheville	1,530	30	Laurel Ridge	3,820	32
Patrick & Henry	1,550	26	Virginia Peninsula	4,090	21
Danville	1,610	26	Brightpoint	5,460	17
Rappahannock	1,790	44	J. Sargeant Reynolds	5,710	19
Southwest Virginia	1,800	15	Germanna	5,830	16
Southside Virginia	2,120	40	Tidewater	11,030	12
			Northern Virginia	31,580	15

SOURCE: JLARC analysis of VCCS student data, 2024–25.
NOTE: FTEs include dual enrollment and non-credit FastForward students. Figures are rounded.

This chapter uses a full-time equivalent (FTE) student as the enrollment metric, rather than total headcount, which is used in the rest of this report unless otherwise noted.

FTE is used because it is a standard way of reporting enrollment that accounts for the number of credit hours students are enrolled in (15 hours per semester; 30 hours per academic year) and allows for standardized comparison of student enrollment and spending.

Typically, non-credit FastForward students are not included in accounts of FTE enrollment, but this undercounts the number of students served and services provided by community colleges.

JLARC staff estimated an FTE equivalent for non-credit FastForward students in this chapter and have included that in all FTE counts and calculations. See Appendix B for a description of this estimation technique.

Dual enrollment students make up a significant portion of enrollment at most small community colleges, particularly the state's three smallest colleges. For each of these colleges, at least 30 percent of their enrollment is dual enrollment, meaning the college does not collect tuition for most of these students. In addition, most of these students are not taking their courses on campus or with college faculty (over 80 percent of dual enrollment courses are taught at high schools by high school instructors). Without dual enrollment students, enrollment at Mountain Gateway is 400 FTEs, enrollment at Eastern Shore is 440 FTEs, and enrollment at Paul D. Camp is 580 FTEs.

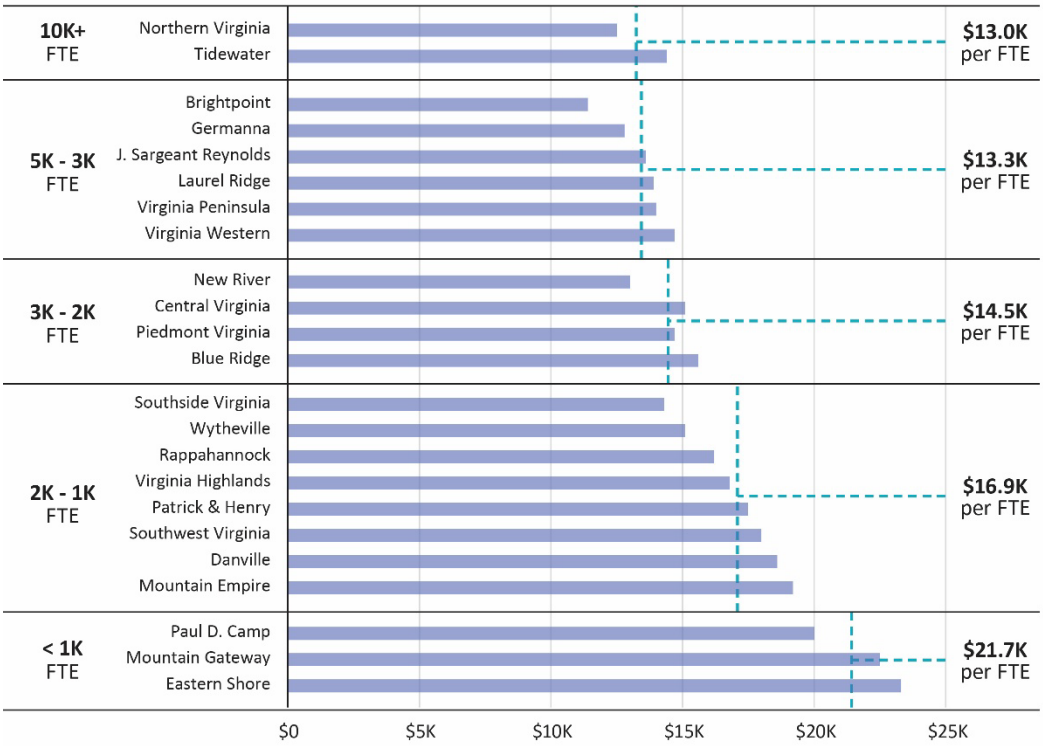
Small colleges have higher spending per student

VCCS's smallest colleges (Eastern Shore, Mountain Gateway, and Paul D. Camp) have the highest per student spending of all colleges in the system. Eastern Shore spent the most per student, approximately $23,300 per FTE student in FY24. Mountain Gateway and Paul D. Camp spent approximately $22,500 and $20,000 per FTE, respectively.

Generally, larger colleges spend less per student than small colleges because they can take advantage of economies of scale. The largest VCCS colleges with over 10,000 students have the lowest spending, averaging $13,000 per FTE. Spending per student generally increases incrementally based on college size (Figure 5-1). Each college has fixed costs, regardless of its size. For example, all colleges must have a president,

administrative staff, student services staff, library, and other resources needed to operate as an independent college.

FIGURE 5-1
Smaller colleges tend to spend more per student



SOURCE: JLARC analysis of VCCS student enrollment data, 2023–24, VCCS financial statements, FY24.
NOTE: Spending excludes the system office and shared services center. Spending is adjusted for inflation.

Northern Virginia Community College, VCCS's largest college with over 30,000 FTEs, has the system's second lowest spending per FTE. In FY24, Northern Virginia spent approximately $12,500 per FTE. Even though the college is located in the highest cost region of the state, it can take advantage of very large economies of scale, which more than make up for the region's higher costs.

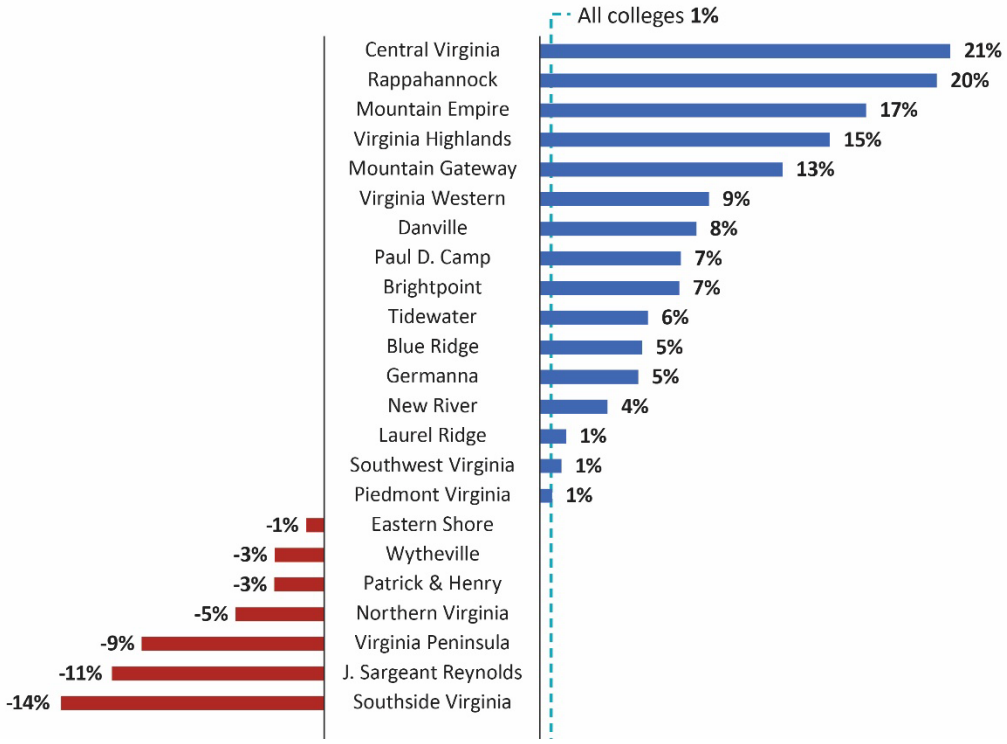
Brightpoint Community College has the system's lowest spending per FTE at $11,400. Although Brightpoint is not the system's largest college, it is among the largest and jointly operates its workforce development program with the other college in the region, J. Sargeant Reynolds Community College, reducing both colleges' spending. Brightpoint and Reynolds operate a single workforce development program, the Community College Workforce Alliance, which serves the whole Richmond/Crater region (GO Virginia Region 4), rather than each operating an independent workforce development program. This is efficient for both colleges.

Spending per student has increased at more than half of small colleges

Declining enrollment is contributing to increases in spending per student at community colleges. Among all community colleges, spending per FTE student increased only slightly, by about 1 percent ($13,889 to $13,962) between FY18 and FY24 (inflation adjusted). However, spending per student has increased more substantially at some smaller colleges.

Per student spending at five colleges increased more than 10 percent (adjusting for inflation) between FY18 and FY24, and four of those colleges were small (Figure 5-2). Per student spending at Rappahannock increased by 20 percent, at Mountain Empire by 17 percent, at Virginia Highlands by 15 percent, and at Mountain Gateway by 13 percent from FY18 to FY24 (adjusting for inflation). Mountain Gateway is one of the smallest schools with fewer than 1,000 FTEs, and the other three are below median enrollment. Central Virginia had the largest increase in per student spending, 21 percent, and has enrollment around the system median. Additionally, 13 of the 16 colleges with spending increases also experienced enrollment declines in that same period. Spending per student often increases as enrollment declines because of fixed costs that cannot be reduced as enrollment (and associated tuition revenue) drops.

FIGURE 5-2
Spending per student increased for most colleges from 2017–18 to 2023–24



SOURCE: JLARC analysis of VCCS student enrollment data, 2017–18 through 2023–24, VCCS financial statements, FY18 through FY24.
NOTE: Spending excludes the system office and shared services center. Spending is adjusted for inflation.

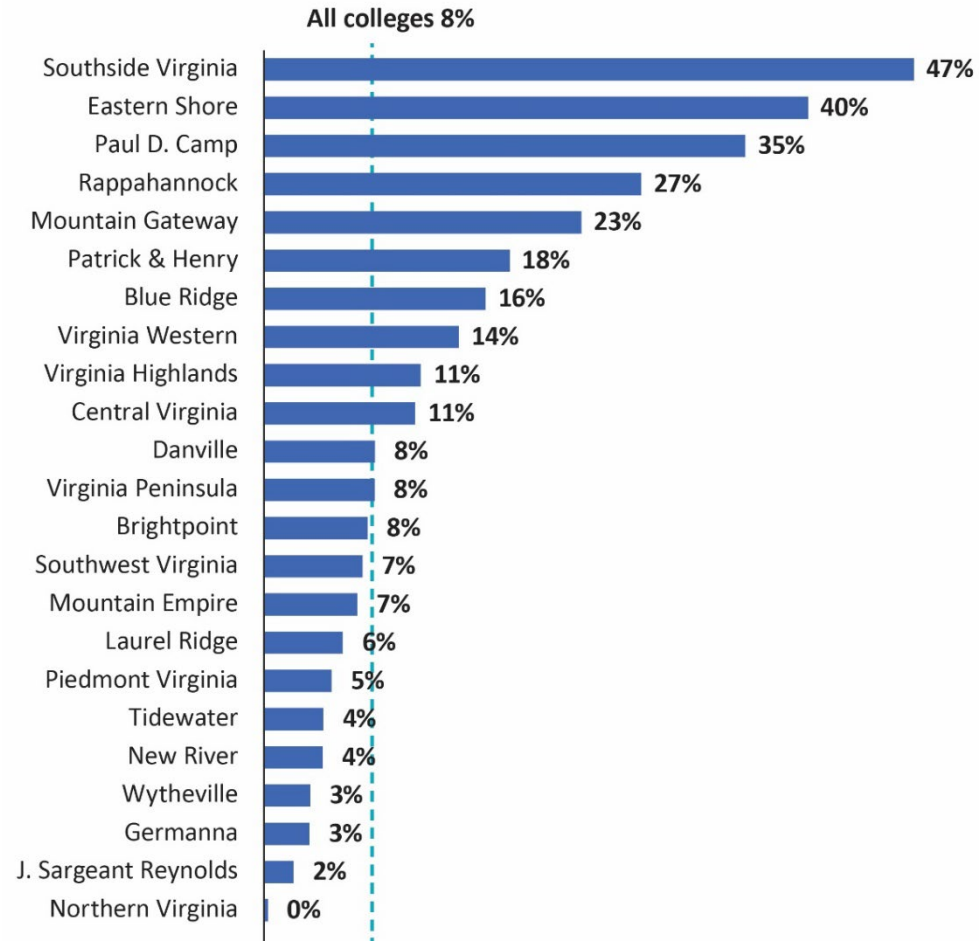
Some small colleges have very small class sizes

Some small colleges are holding common general education courses with fewer than 10 students (sidebar, Figure 5-3). At Southside Virginia, 47 percent of general education classes in fall 2024 had fewer than 10 students. In fall 2024, Eastern Shore held 40 percent of these courses with fewer than 10 students, and Paul D. Camp held 35 percent of these courses with fewer than 10 students. Colleges that held 20 percent or more of their common general education courses with fewer than 10 students were all small with lower enrollment than the VCCS median, and the system's three smallest colleges were included in this group.

JLARC staff **assessed class sizes** by reviewing class sizes only for the 20 most popular general education courses taken by VCCS students. This approach was used because optimal enrollment for these types of classes is generally around 20 to 30 students. Developmental and lab classes were excluded. Courses included were freshman and sophomore courses in accounting, biology, business, chemistry, communications, economics, English, history, information technology essentials, math, philosophy, psychology, and sociology.

These class sections may have originally enrolled more than 10 students when the college decided to run the class but dropped below 10 students after the period in which students can add or drop classes without penalty; however, in these cases, the classes still likely started with relatively low enrollment.

FIGURE 5-3
Several colleges teach a substantial proportion of courses with fewer than 10 students



SOURCE: JLARC analysis of VCCS course enrollment data, fall 2024.
NOTE: Includes the 20 highest enrollment courses taught within VCCS. Excludes labs, developmental courses, and courses taught via Shared Services Distance Learning.

Most larger colleges typically have larger classes. The state's five largest community colleges each have 8 percent or less of their general education courses with enrollment of fewer than 10 students.

Declining enrollment and the ongoing shift toward CTE courses have resulted in the average class size declining at most colleges. This is not inherently bad; smaller class sizes can be associated with higher quality instruction for students. However, when classes become too small, they can be inefficient for a college to offer. At current tuition rates, community colleges may not "break even" on courses where enrollment falls below 10 students when accounting for faculty and other indirect costs.

Online education reduces space utilization, especially at small colleges

All colleges are offering a significant proportion of their courses online in asynchronous formats. All but one college offers 30 percent or more of their courses through an online asynchronous format, and 10 colleges offer over half of their courses asynchronously (sidebar). Of these 10 colleges, five were very small colleges that enroll under 2,000 FTEs: Danville, Eastern Shore, Mountain Empire, Paul D. Camp, and Southwest Virginia. (The other five colleges with over 50 percent of classes asynchronous online were Blue Ridge, Central Virginia, Germanna, Laurel Ridge, and Virginia Peninsula.)

JLARC staff reviewed the proportion of courses that were taught asynchronously in the 2024–25 school year. The analysis focused on asynchronous courses, rather than all courses with online components, because these classes are unlikely to use any physical space resources on the campus. Across the system, the median college taught 49 percent of courses asynchronously.

A key reason these colleges with very small enrollments exist is to provide convenient physical access to higher education for all Virginians. College and campus locations were originally chosen to put every Virginian within approximately a 30-mile driving distance of a VCCS campus. Because these colleges are in lower-population and rural areas of the state, they generally have low enrollment, which results in higher spending per student (Table 5-2). As these colleges increasingly provide education via virtual platforms, their original purpose of providing physical access raises new questions about space utilization and efficiency, even as a physical presence remains important for certain students.

Most VCCS colleges, including these five small colleges with particularly high online asynchronous learning rates, have relatively low physical space utilization rates. The combination of enrollment declines, dual enrollment that is primarily located at high schools, and increasing use of online education results in lower use of physical spaces. Additionally, many of the non-credit CTE programs may use non-traditional and rented spaces (e.g., driving ranges for CDL, garages for diesel mechanics, welding cubes for welding, pole yards for power line workers) rather than on-campus facilities.

TABLE 5-2
Five small colleges have high proportions of classes taught asynchronously

	FTEs, 2024–25	$ per FTE FY24	% courses asynchronous 2024–25
Eastern Shore	640	$23,300	60%
Paul D. Camp	840	$20,000	58
Mountain Empire	1,480	$19,200	54
Danville	1,610	$18,600	53
Southwest Virginia	1,800	$18,000	51
VCCS median	2,370	$14,000	49

SOURCE: JLARC analysis of VCCS student and class data, 2023–24 and 2024–25, and VCCS financial statements, FY24.
NOTE: Excludes dual enrollment courses.

The median VCCS college is using its physical space less than SCHEV guidelines. The median college uses its classrooms 24 hours per week and fills 40 percent of classroom seats when used. SCHEV's guidelines state that classrooms should be used 40 hours per week, with 60 percent of seats filled when in use. Classroom utilization at the five small colleges with the highest percentage of asynchronous courses falls well below SCHEV guidelines (Table 5-3).

TABLE 5-3
Low space utilization at VCCS colleges, including small colleges with high asynchronous course utilization

	Avg hours per week classroom in use	% seats filled when classroom in use
Mountain Empire	12	12%
Paul D. Camp (main campus)	15	40
Southwest Virginia	20	23
Paul D. Camp (Suffolk campus)	25	24
Danville	25	30
Eastern Shore	27	40
VCCS median	24	40
SCHEV guideline	**40**	**60%**

SOURCE: SCHEV Space Utilization Report, Fall 2024.
NOTE: Paul D. Camp has two campuses, one in Franklin and one in Suffolk. SCHEV reports space utilization separately for each community college campus.

Low space utilization creates efficiency challenges, especially at small community colleges that already have high per student spending. Funds and other resources are necessary to maintain these spaces. Across all colleges, approximately 14 percent of operating expenses are for facility operations and maintenance, but at individual colleges these expenses range between 7 and 20 percent of operating expenses. Three of the five very small colleges with high online course utilization spend a higher proportion

than average on facility operations and maintenance—19 percent at Paul D. Camp, 16 percent at Danville, and 15 percent at Eastern Shore.

VCCS indicates that SCHEV space utilization reports do not account for alternative uses at colleges, but VCCS does not collect information on these uses (sidebar). This makes it difficult to discern the extent to which these physical spaces are used. To better monitor efficiency, VCCS should collect more comprehensive data on how campus spaces are used, given the significant resources required for their maintenance and upkeep.

SCHEV space utilization data includes use of space for college credit courses. The data excludes other space usage, specifically: non-credit courses, high school courses, governor's or lab schools, or other regular community uses of community college space.

RECOMMENDATION 7

The State Board for Community Colleges should direct staff to begin collecting comprehensive information about how colleges are utilizing physical space, including data on non-credit course and other uses, such as rentals or use by local governments or K–12 schools.

Fewer high school students and additional competition may reduce future enrollment

Efficiency challenges may increase in the near future. Although VCCS serves a wider range of students than four-year institutions, VCCS still heavily depends on traditional college-age student (age 17–24) enrollment for its financial health and program and operational stability. As of fall 2024, when dual enrollment students are excluded, two-thirds of VCCS students are traditional college-age students.

Although most VCCS students are traditional college age, few students appear to enroll directly after high school graduation. According to SCHEV data, only 10 percent of VCCS's fall semester students graduated from a Virginia high school within the past 12 months.

VCCS will likely begin to experience a modest decline in traditional college-age students in the next three to five years as the population of Virginia high school 12th grade students begins to decline. The number of high school 12th grade students is peaking this year and expected to decline by almost 10 percent before stabilizing then slightly increasing through 2030–31. VCCS colleges may not begin to experience a decline related to these demographic changes for three to five years because few of their students enroll upon graduation from high school (sidebar).

VCCS colleges may also face more competition for incoming students from four-year institutions with high acceptance rates. The expected decline in traditional college-age students will mean all institutions will be competing for fewer students, and four-year institutions are even more dependent on traditional college-age students for their financial health and operational and program stability than community colleges (sidebar). To the extent that four-year institutions are successful in recruiting students who would have otherwise attended a community college, VCCS colleges could experience additional enrollment declines. VCCS system office staff and some community college presidents observed that four-year institutions with very high acceptance rates are more actively recruiting students who historically may have attended community college.

JLARC's 2024 Higher Education Institutional Viability report describes the changing landscape for four-year institutions and assesses the viability of each of Virginia's four-year institutions.

Further regionalization may help address efficiency challenges at small colleges

Virginia's 23 individual colleges provide the system with a presence throughout the state and accessibility for students regardless of where they live. Community colleges play an important role in their region, especially rural regions, where few other institutions may exist. According to the Federal Reserve Bank of Richmond, in some rural communities, the community college "may be one of the few institutions with the local presence and trust to facilitate economic and community development."

When enrollment declines, though, community colleges experience a loss in tuition revenue that supports the institution. Large and persistent declines can lead to sustainability challenges for community colleges. In other states, one common approach to addressing these sustainability issues is merging independent colleges within a particular geographic region to gain economies of scale in administration and some other areas, while maintaining a physical presence at each campus to deliver some in-person services, particularly CTE programs that may require in-person instruction and oversight. Other states have merged one or more of their colleges:

- Alabama – In 2017, the state merged three colleges in the southern part of the state to form a single college.
- Connecticut – In 2023, the state merged 12 independent community colleges into a single college.
- Georgia – Between 2016 and 2019, the state merged at least four largely two-year institutions with four-year institutions.
- Vermont – In 2023, the state merged a community college with two four-year institutions to create Vermont State University.

Although it has not recently merged colleges, Indiana has historically operated one statewide community college with 45 locations throughout the state.

Colleges with higher enrollment in regions with fewer colleges tend to be more efficient

Usually, one large college with multiple campuses can be more efficient than several smaller independent colleges in one region. This is best exemplified by Northern Virginia Community College, which is by far the largest community college in the state with over 30,000 FTE students. The college has six individual campuses in four localities (Alexandria, Fairfax, Loudoun, and Prince William). Northern Virginia has the second lowest spending per student ($12,600), while still being in the highest cost region of the state.

In contrast, small community colleges typically are located in regions with several independent colleges rather than one larger college with several campuses. Most of the state's small colleges (10 out of 11) are located in five GO Virginia regions with three

or more colleges (sidebar). The remaining four GO Virginia regions are generally served by fewer, but larger, colleges that each serve more students.

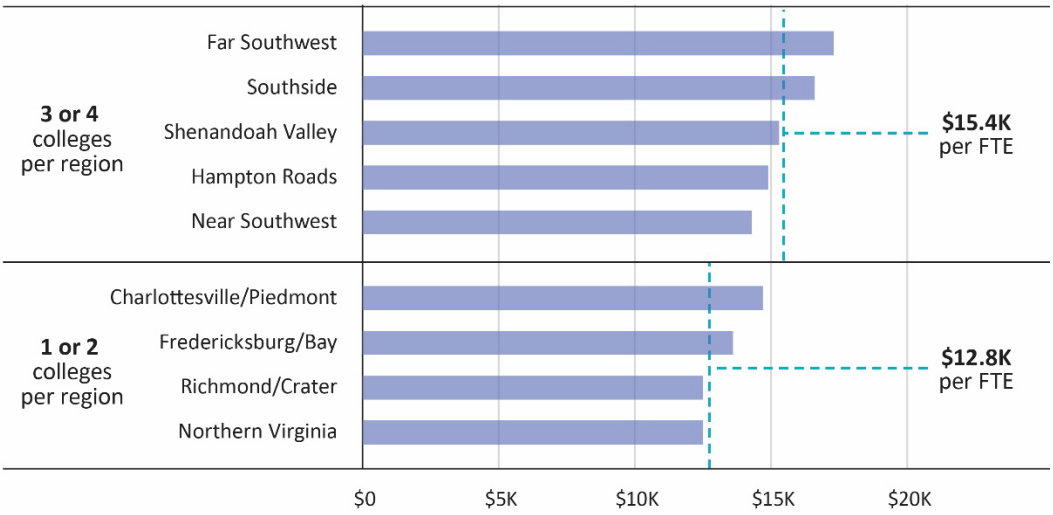
In general, spending per student is typically lower in GO Virginia regions with fewer colleges. Spending per student in regions served by one or two larger colleges is 20 percent lower than in regions served by three or four smaller colleges (Figure 5-4).

GO Virginia regions are used as the regional designation throughout this chapter because the localities that make up each of the GO Virginia regions share similar economic development and workforce needs and are geographically similar.

Each community college serves a designated service area made up of several localities. Some community college service areas include localities in two GO Virginia regions. In these cases, JLARC staff assigned the community college to the GO Virginia region where it served the highest number of localities.

Community colleges with service areas in two GO Virginia regions were: Brightpoint, Germanna, Laurel Ridge, Mountain Gateway, Patrick & Henry, Piedmont Virginia, Rappahannock, Reynolds, and Southside Virginia.

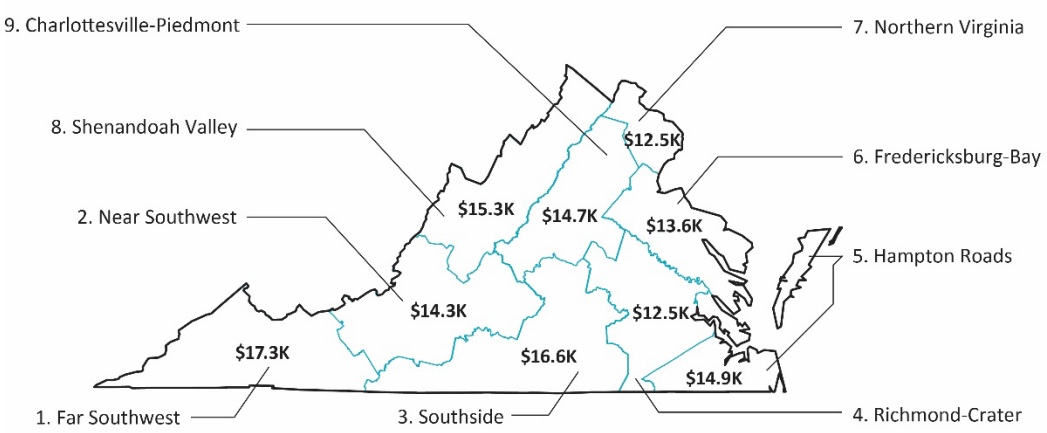
FIGURE 5-4
Regions with more, smaller colleges tend to spend more per student



SOURCE: JLARC analysis of VCCS student enrollment data, 2023–24, VCCS financial statements, FY24.
NOTE: Spending excludes the system office and shared services center. Spending is adjusted for inflation.

Consequently, these regions with more and smaller colleges have higher spending per student than regions with fewer, larger colleges (Figure 5-5). For example, the Far Southwest region has four smaller colleges and has the state's highest average spending per student. Conversely, the Northern Virginia region has only one large college and has the lowest spending per student (and is a much higher cost region than Far Southwest).

FIGURE 5-5
Spending per student varies by region



SOURCE: JLARC analysis of VCCS student enrollment data, 2023–24, VCCS financial statements, FY24.
NOTE: Spending excludes the system office and shared services center.

VCCS should address ways to maintain efficiency in changing higher education landscape

Multiple dynamics discussed throughout this report underscore the changing landscape within which community colleges are operating:

- Dual enrollment students representing a larger percentage of total enrollment FTE, yet not paying tuition and taking relatively few courses in-person at the community college;
- Increasing use of online instruction, making physical location and geographic proximity somewhat less important for some—but not all—students;
- Increasing proportion of classes with fewer than 10 students and declining utilization of classroom space at many colleges; and
- Pending decline in the number of traditional college-age students and competition from four-year institutions.

Moving forward, it may be challenging for VCCS to preserve the benefits of its current local footprint, while at least maintaining and (ideally improving) efficiency and effectiveness.

To make effective decisions about efficiency and regionalization, the state board will need comprehensive information from the VCCS central office and individual colleges. One of the benefits of a system, rather than individual colleges, is the relative ease of collecting and maintaining accurate centralized information. As noted earlier in this report, better information is needed about online learning, the FastForward program, and dual enrollment demand and capacity. Data on student outcomes by

student type at each college, combined with information on regional workforce needs will also help to inform the feasibility and value of regionalization.

State grants colleges flexibility in the services they provide which offers opportunities for instructional, operational, and administrative regionalization

The Code of Virginia does not require every community college to offer a full, comprehensive array of community college services. The community college's original enabling legislation lays out five areas in which community colleges *can* offer instruction but only requires them to offer at least one. Those five areas of instruction are (1) academic courses for transfer to a four-year program; (2) technical curriculum (including leading to an associate degree); (3) CTE curriculum leading directly to employment; (4) adult general and continuing education; and (5) noncredit training to meet business and industry needs. Later legislation required every community college to (1) operate a workforce development program and (2) offer dual enrollment. A community college could offer just workforce training and dual enrollment and meet statutory requirements.

Advisor-to-student ratios vary significantly across colleges. VCCS system office staff and literature indicate that appropriate ratios are around 350 students per one advisor.

According to data collected from the colleges through a data collection instrument used for this study, small colleges generally had much lower ratios than larger colleges. Colleges with below median enrollment had an average student-to-advisor ratio of 258:1. Colleges that had median enrollment or larger had an average student-to-advisor ratio of 505:1.

For example, in the Hampton Roads region, Tidewater and Virginia Peninsula had ratios of 836:1 and 601:1 respectively, while Paul D. Camp and Eastern Shore had ratios of 169:1 and 163:1 respectively.

The system has opportunities to improve efficiency at smaller colleges without requiring consolidation or closures. These opportunities would involve regional cooperation and coordination among smaller colleges for some services and the scaling back of some operations and services currently provided by individual colleges. For example:

- Regional workforce training – Within regions, colleges could operate a single workforce training program, rather than each operating individual workforce training programs. This could allow colleges to collectively address regional workforce needs and avoid duplication, as well as streamline workforce training programs. Brightpoint and J. Sargeant Reynolds already do this by operating a single workforce training program jointly in GO Virginia region 4, the Community College Workforce Alliance.
- Regional lead colleges for academic transfer education – One college in each region could offer academic transfer courses for all colleges in the region, allowing for larger classes and eliminating the need for academic administrative staff (e.g., deans, vice president for instruction, instructional designers) at each college in the region. VCCS colleges heavily rely on adjunct faculty to teach classes, which may limit instructional staff savings.
- Regional advising hubs – One college in each region could offer all advising and student supports for all colleges in a region. Advisors could primarily offer services virtually (e.g., virtual meetings, phone calls, text messages), which many advisors already do, and have a certain number of in-person hours at each college in the region. This could help colleges standardize student-to-advisor ratios across all colleges in a region at appropriate levels (sidebar).

- Regional administration consolidation – One college in each region could provide administrative services for all colleges in the region. Financial aid, admissions and enrollment management, and fiscal management and budgeting could be considered for regionalization. The system office could also handle some of these services centrally.
- Coordinating with regional higher education centers – The General Assembly has established and funded five regional higher education centers that provide some programs and services similar to local community colleges (sidebar). Community colleges with a regional education center in their service region should coordinate with the center to ensure their programs are not duplicative and regional program needs are being met. A proposal has been developed to merge the New College Institute with Patrick & Henry Community College.

Five regional higher education centers are funded by the General Assembly to provide access to training, certifications, and degrees through partnerships with higher education institutions, businesses, community organizations, and industries. The five centers are:

- Institute for Advanced Learning and Research (Danville),
- New College Institute (Martinsville),
- Roanoke Higher Education Center (Roanoke),
- Southern Virginia Higher Education Center (South Boston), and
- Southwest Virginia Higher Education Center (Abingdon).

Strategic review needed and plan developed to deliver community college services more efficiently

Changing trends in enrollment and course delivery may require the system to fundamentally revisit whether its structure is the most efficient way to use its funding to achieve its mission. The legislature has recognized this through Appropriation Act language: "it is the intent of the General Assembly that funds available to the Virginia Community College System be reallocated to accommodate changes in enrollment and other cost factors at each of the community colleges." The board is also tasked in statute with periodically assessing the need for and location of community colleges statewide.

The board should direct the VCCS system office to undertake a strategic review to determine how to achieve improved efficiency, especially in regions with several smaller colleges. The review could be supported by a third-party organization with expertise in higher education efficiency and strategic management. The review should:

- identify lessons learned from other states that have consolidated or regionalized within their community college systems;
- assess the advantages, disadvantages, and feasibility of adopting the model used in Northern Virginia in other regions, especially those with relatively higher spending per student and with multiple colleges; and
- identify specific strategies to gain efficiency at small colleges and in regions with multiple colleges.

RECOMMENDATION 8

The State Board for Community Colleges should direct Virginia Community College System staff to initiate a strategic review and propose a plan for how the system can efficiently deliver services, especially in regions with smaller colleges.

Enrollment declines and shifts in program enrollment may necessitate future funding changes

Enrollment declines and changes in program enrollment are affecting the system's revenue, which may eventually require a fundamental change in the state's approach to funding VCCS. VCCS currently receives the same general fund appropriation and tuition revenue for students irrespective of their academic program, the costs of delivering certain types of instruction, or the economic demand for the credentials or skills developed through the program.

Declining enrollment and the General Assembly's decision to limit tuition increases have reduced tuition revenue. Tuition and fee revenue has declined from accounting for 33 percent of revenue in FY18 to 19 percent in FY24. Much of this reduction is attributable to enrollment declines, but legislative direction to minimize tuition increases has also played a significant role. In particular, Appropriation Act language in the past few years has directed colleges to minimize or eliminate tuition increases for students and provided funds to help colleges stabilize tuition. As a result, VCCS tuition was held constant between the 2018–19 and 2022–23 academic years. Between 2022–23 and 2024–25, tuition rates increased about 6 percent (not adjusting for inflation). The General Assembly has provided more general fund support; as a result, VCCS is more reliant on state appropriations (50 percent of revenue in FY24.)

Tuition revenue will also decline for the community colleges that were charging dual enrollment tuition. As the College and Career Ready Virginia program (CCRV) is implemented in 2025–26, which prohibits colleges from charging tuition for most dual enrollment courses, tuition revenue has the potential to continue declining as a portion of total revenues. (Colleges still receive a pro-rated amount of general funds for dual enrollment students through the state's funding formula.)

The shifting proportion of enrollment from academic transfer students to CTE students is also adversely affecting VCCS's revenue. Historically, VCCS colleges have subsidized CTE programs, which are typically more expensive, with academic program revenues. As student enrollment has decreased in academic transfer programs and increased in CTE programs, this subsidization no longer works as well to cover total program costs.

In general, CTE courses cost more to deliver than academic transfer courses. In FY24, colleges spent an average of $242 per credit hour for academic transfer courses compared with $466 per credit hour for CTE courses. Colleges receive an average of $341 in revenue per credit hour for all courses. Consequently, transfer courses yield $126 in excess revenue per credit hour; while CTE courses cost $99 more than revenue per credit hour (sidebar).

If these trends continue, which they are expected to, VCCS revenue will increasingly make up a lower proportion of cost, which will further stress the system financially. In the longer term, once the state board has addressed some of the efficiency challenges

Costs of CTE courses can vary dramatically. VCCS reported the following per credit hour costs for a selection of CTE courses in FY24:

- Automotive - $750
- Cosmetology - $291
- Dental hygiene - $1,588
- Fire science - $364
- Instrumentation - $365
- Practical nursing - $998
- Trucking - $1,168
- Welding - $582

VCCS reported the following per credit hour costs for a selection of academic courses in FY24:

- Biology - $339
- Chemistry - $398
- Economics - $208
- English - $205
- History - $155
- Math - $262
- Spanish - $255

described in this chapter, legislators may need to consider revising the VCCS financing structure to differentiate funding by programs and more closely tie funding to enrollment by program.

Some states have begun to explore financing models for their community colleges that account for the differing costs and outcomes by programs. Texas implemented a new funding model in 2023 that accounts for differing costs, and North Carolina legislators have considered a similar new funding model for their community college system but have not yet adopted any changes. (Appendix E provides more detail about revenue changes at community colleges.)

Appendix A: Study resolution

Virginia Community College System

Authorized by the Commission on November 7, 2024

WHEREAS, Virginia employers need a quality workforce including candidates with associate degrees and technical certifications and credentials, and wages for individuals without four year degrees have been rising after decades of stagnation; and

WHEREAS, despite these workforce needs and trends, community college enrollment has declined 23% over the past decade, and 11 colleges lost more than 20% of their enrollment; and

WHEREAS, the Appropriation Act specifies that funds available to the Virginia Community College System be reallocated to accommodate changes in enrollment and other cost factors at each of the community colleges; and

WHEREAS, the 2024 General Assembly established the College and Career Ready Virginia Fund and required local school divisions to offer no cost dual enrollment courses for the Passport Program and the Uniform Certificate of General Studies Program; and

WHEREAS, VCCS's six-year plan discusses the community college system's enrollment declines, and details a plan to transform the system through a focus on (1) adults who need to reskill or upskill to improve their employment options, and (2) high school students who want to earn a postsecondary credential to improve their employment options; now, therefore, be it

RESOLVED by the Joint Legislative Audit and Review Commission that staff be directed to review how well the Virginia Community College System is adapting to the changing higher education landscape. In conducting its review, staff shall assess: (i) trends in enrollment and its composition, and its impact on tuition and fee revenue; (ii) student outcomes and how well the community college system provides students the necessary skills and credentials to meet the workforce needs of Virginia employers; (iii) the use of virtual instruction and other innovative approaches to fully utilize instructional capacity and meet student needs; (iv) opportunities offered to high school students to gain a postsecondary credential or degree through concurrent enrollment or other strategies; (v) ways to gain operational efficiencies given trends in enrollment and its composition; and (vi) how other states have adapted their community college systems to improve student outcomes, programmatic alignment with workforce needs, or operational efficiency.

JLARC shall make recommendations as necessary and review other issues as warranted.

All agencies of the Commonwealth, including the Virginia Community College System, State Board for Community Colleges, State Council for Higher Education in Virginia, local school divisions, public four year institutions, Virginia Office of Educational Economics, Virginia Employment Commission, Virginia Department of Workforce Development and Advancement, Department of Planning and Budget, and Secretary of Education shall provide assistance, information, and data to JLARC for this study, upon request. JLARC staff shall have access to all information in the possession of agencies

pursuant to § 30-59 and § 30-69 of the Code of Virginia. No provision of the Code of Virginia shall be interpreted as limiting or restricting the access of JLARC staff to information pursuant to its statutory authority.

Appendix B: Research activities and methods

Key research activities performed by JLARC for this study included:

- interviewing Virginia Community College System office staff and community college staff;
- collecting and analyzing data on enrollment, course modality, student outcomes, revenue, and financial health;
- collecting and analyzing data on CTE program outcomes and alignment to state workforce needs;
- collecting data from local school divisions on dual enrollment and community colleges on course design and advising;
- reviewing research literature and other documents; and
- reviewing state laws, regulations, and policies relevant to dual enrollment and online education.

Site visits and interviews

Site visits and interviews were key research methods JLARC staff used to conduct research for this report. JLARC staff conducted site visits to seven community colleges; interviews with staff at 10 additional community colleges; interviews with VCCS system office staff; interviews with K–12 division staff; and interviews with local economic development agencies.

Site visits and interviews at community colleges

Site visits at seven community colleges were conducted with college leadership to obtain broad information about enrollment, revenue, and spending trends. During these site visits, JLARC staff also interviewed a mix of academic affairs, workforce development, student support, and dual enrollment staff. Each site visit included a campus tour that focused on career and technical training sites on the campus. JLARC staff conducted site visits at:

- Danville Community College;
- Mountain Gateway Community College;
- Northern Virginia Community College;
- Rappahannock Community College;
- Virginia Peninsula Community College;
- Virginia Western Community College; and
- Wytheville Community College.

Additional community college staff

In addition to interviews conducted during site visits, JLARC staff conducted virtual interviews with college-level staff at 10 additional colleges. JLARC staff interviewed a different mix of staff at each college. Some interviews were with academic affairs and student support staff to discuss online education, course development, student support services, and advising; dual enrollment staff to discuss courses offered to service area school divisions, development of memoranda of understanding with

school divisions, and challenges in offering dual enrollment; institutional research staff to discuss data collections and surveys administered; workforce development staff to discuss career and technical education programs; and presidents to discuss enrollment and financial changes, and how the college is managing the changing landscape for higher education. JLARC staff conducted interviews with staff at the following additional colleges (Table B-1):

TABLE B-1
JLARC interviews with additional community college staff

Community college	Academic affairs	Dual enrollment	Institutional research	President	Workforce development
Brightpoint	✓				
Eastern Shore				✓	
J. Sargeant Reynolds	✓	✓	✓		✓
Laurel Ridge	✓	✓	✓		✓
Mountain Empire				✓	
Patrick & Henry				✓	
Paul D. Camp				✓	
Piedmont Virginia	✓	✓	✓		✓
Southwest Virginia	✓	✓	✓		✓
Southside Virginia				✓	

SOURCE: JLARC community college interviews (2025).

VCCS system office staff

Interviews with VCCS system office staff focused on a variety of topics covered in the study. JLARC staff interviewed

- academic affairs and student support staff to broadly understand VCCS policies around online education, student support, advising, dual enrollment, and College and Career Ready Virginia (CCRV) implementation; and
- administrative and finance staff to understand the system's budget allocation methodology and the impact of enrollment changes on finances;
- research and reporting staff to understand data availability and interpretation; and
- workforce development staff to understand the types of career and technical (CTE) programs offered through the community colleges, evolution of those programs, alignment of programs with occupations, and financial aid for students enrolled in these programs.

K–12 division staff

JLARC staff interviewed staff at six K–12 school divisions regarding dual enrollment programs (Arlington, Chesapeake, Chesterfield, Pittsylvania, Prince William, and Russell). Topics discussed during these interviews included the extent to which the division offers dual enrollment, extent to which students are qualified for and interested in participating in dual enrollment, challenges to expanding dual enrollment, the process of developing memoranda of understanding with community colleges for dual enrollment, implementation of the CCRV program, and CTE dual enrollment.

Admissions and enrollment staff at Virginia public four-year higher education institutions

Interviews with admissions and enrollment staff at three public four-year institutions (Old Dominion University, Virginia Commonwealth University, and Virginia Tech) were conducted to understand the advantages of dual enrollment for their students and how UCGS and Passport courses transfer and count for credit at their institutions.

Local economic development agencies

Staff with four local economic development agencies and industrial associations (Shenandoah Valley Partnership, Virginia Manufacturers Association, and Virginia Gateway Region) were interviewed regarding community college workforce development programs, extent to which regional businesses find the programs useful and employ their graduates, and extent to which the community colleges work with local businesses to develop and maintain programs that address workforce needs.

Data collection and analysis

JLARC staff collected several types of data from VCCS and other state agencies (VDOE, SCHEV, and the Virginia Office of Education Economics [VOEE]) and national databases to assess community college enrollment, outcomes, prevalence of online education, CTE program alignment and outcomes, dual enrollment, and college efficiency.

VCCS enrollment

JLARC assessed enrollment using the VCCS student files for the 2015–16 through 2024–25 academic years. Students were deduplicated by year so that each student appeared once per year per college and program placement within each year was determined using the academic and curricular plan values assigned to each student in the last semester that student attended. Type of program (transfer, CTE, non-program placed) was determined by the academic plan and intended degree of each student. For example, a student with an academic plan and intended degree of a General Studies associate degree was deemed a "transfer student." Total enrollment numbers in each academic year also include the count of FastForward (non-credit) CTE students taken from FastForward enrollment files provided by VCCS.

Student outcomes in online courses

JLARC conducted regression analysis related to student outcomes in online courses compared to peers taking in-person sections of the same courses. VCCS student-level data for fall 2018 through spring 2025, excluding spring 2020 through fall 2021 because of pandemic effects, was used for this analysis. The outcome analyzed was success (a grade of A, B, or C) or failure (a withdrawal or grade of D or F) for students who took at least one in-person course and one online course during the time period analyzed. The analysis did not include dual enrollment students. See Appendix D for more detail on the methodology for this regression analysis.

In addition, JLARC used bivariate analyses to calculate success rates overall and for students in 10 of the 20 most popular general education courses for 2018–19 and 2024–25 for each modality (in-person, asynchronous, and synchronous). This analysis was conducted system-wide and by college. The same

courses were used in this analysis and the regression analysis. JLARC compared the success rates of in person and asynchronous students to calculate a difference in success rate over time.

Prevalence of online education

JLARC used student and course level data from academic years 2015–16 through 2024–25 to calculate the proportion of 1) students who took at least one online course, 2) the proportion of students took exclusively one modality or a mix of modalities, and 3) the proportion of courses taught in each modality across the system and by college. These proportions for the entire population were calculated in total, for transfer students, and for CTE students.

CTE graduation, completion, and credential rates

JLARC staff analyzed VCCS student and graduation files (credit CTE programs) and FastForward enrollment, completion, and credential summary data by program and community college to assess the extent to which students completed (graduated with a degree, certificate, or other credential) a CTE credit program, completed a short-term FastForward noncredit program, and received an industry credential after completing a FastForward program. For purposes of this analysis, CTE credit programs included applied associate degrees, diplomas, certificates (excluding the Uniform Certificate of General Studies), and career studies certificates.

For credit CTE programs, students were grouped into cohorts 2017–18 through 2023–24 based on the year in which they began a specific CTE program, such as an AAS in nursing, according to their degree intent and academic plan (program of intent). Each cohort was matched to subsequent student and graduate files (students were also matched to the graduate file for the cohort year to capture graduations from CSC programs) to determine if the individual was still a student or had graduated with the intended degree. Binary variables were created to indicate if the student had graduated in year 1 (cohort year) through year 6. Only the 2017–18 and 2018–19 cohorts had year 6 graduates.

JLARC staff calculated graduation rates for CTE credit programs based on the percentage of students who graduated from their program of intent by year three. Further analysis of graduation rates for these two cohorts with year 6 graduates indicated that the majority of students graduated by year three of the six-year period. Graduation rates for other cohorts with at least three years of data after the cohort year had consistent graduation rates by year 3 for each cohort. A three-year graduation rate is commonly used in other research.

The FastForward enrollment, completion, and credential files were already organized for analysis purposes. The files contained the number of enrollees, completers, and credentials by college, by program, and by college and program. Completion rates were calculated as the number of completers divided by the number of enrollees multiplied by 100. The credential rate was calculated in a similar fashion.

Frequencies of completion, graduation, and credential rates were calculated for credit CTE programs and FastForward programs overall, community college, and program (at the Classification of Instructional Program, or CIP, program level). To calculate these rates by CIP program level, the relevant CIP Code was assigned to each credit student file based on their academic plan code and matching it to the VCCS Master Program file containing the CIP code for each academic plan code. CIP codes were

assigned to each FastForward programs based on matching the name of the program to the VCCS CredCode file containing the program name and CIP code for each program.

Alignment of CTE programs with high demand occupations

JLARC staff analyzed credit CTE and FastForward enrollment during academic year 2023–24 by CIP program to assess the proportion of enrollment that aligned with high demand occupations on the VOEE 2024 High Demand Occupation List. A summary file of enrollment by CIP program was match merged to the CIP-SOC crosswalk to assign a Standard Occupational Classification (SOC) code. The CIP SOC Crosswalk is produced by the Bureau of Labor Statistics and the National Center for Education Statistics and matches programs of study by CIP codes with occupations by SOC codes. The crosswalk matches programs to occupations based on program and occupation descriptions and staff expertise. The crosswalk is not necessarily an exact match of degrees to occupations, but it is the best tool available for assessing alignment of academic programs to workforce needs.

The summary file of enrollment by CIP program and SOC code was then match merged to the 2024 High Demand Occupation List to determine if the SOC code for the CIP program was on the list, and to determine if the SOC code had above or below average demand (annual average job openings).

As indicated in the report, some CIP programs did not match to an SOC code. After additional analysis, interviews with community college staff, and reviews of GO Virginia regional Growth and Diversification plans, JLARC staff confirmed that at least the top CIP programs for enrollment were high demand occupations, either statewide or for the region.

Dual enrollment courses taken and credential completion

JLARC staff utilized merged VCCS student, class, course, and graduation files to identify dual enrollment students. Dual enrollment students were identified using a combination of academic-plan values, VCCS created an "xdul" variable indicating if a student was dual enrolled, program placed, and under 19 years of old. JLARC retained all students who were identified as dual enrolled and created two cohorts of dual enrolled students who had high school graduation dates of 2024 and 2025, dropping all other students. JLARC then retained all records for those students in semesters that occurred up until the semester they graduated from high school (e.g., 2024 high school graduation year cut-off was the spring 2024 semester).

JLARC used the 2024 and 2025 cohorts to identify 1) how many courses each student took up until their high school graduation, and 2) how many students earned credentials before or concurrently with their high school graduation. The number of courses taken by students were tabulated after deduplicating class and course records for each student in each semester. The number of credentials earned before or concurrently with high school graduation were tabulated after deduplicating records using a combination of graduating academic plan, curriculum plan, and degree type.

UCGS and Passport completion analysis

JLARC staff wrote code in Stata, a statistical software, that would 1) identify all UCGS and Passport courses listed in the approved 2024 program rosters using subject and course numbers in VCCS data and 2) tabulate if a student took the correct combination of courses to complete either program. Staff

applied that code to the 2024 and 2025 dual enrollment graduating cohorts to identify which students completed the Passport and/or UCGS. To verify if a student completed the UCGS, staff compared the outcomes of the Stata code application to student graduation records for each cohort. Some students identified in VCCS data as graduating with the UCGS prior to completing high school were not identified using JLARC's Stata code. Staff concluded that this difference occurs when some students take AP courses at the high school to meet UCGS or Passport course requirements—an occurrence not captured in VCCS data.

Students qualified for and participating in dual enrollment analysis

JLARC distributed a data collection instrument (see below) that asked for 1) the number of rising 11th and 12th graders with at least a 3.0 GPA for fall 2025, and 2) the total number of students who are rising 11th and 12th graders. Using responses from school divisions (n = 93) that represented a significant proportion of fall membership statewide (approximately 87 percent), a qualifying student percentage of 62 percent was identified.

JLARC calculated the number of students and participation rate in dual enrollment using the advanced program participation and fall membership data reported by VDOE. The number of students participating was the number of students taking at least one dual enrollment course provided in the advanced participation report. The participation rate in dual enrollment was calculated as the number of students taking at least one dual enrollment course over the number of 11th and 12th grade students reported in the fall membership data for the matching school year.

Location of dual enrollment courses

JLARC matched VCCS course data to building and room number inventories using unique building and room numbers in the data. Staff deduplicated courses using a unique course ID and tabulated how many courses took place at the high school, college campus, virtually, or at another location.

College efficiency

Staff used data from detailed annual financial statements (by college) for FY18 through FY24 and annual enrollment data by college to calculate commonly used measures of efficiency, including change in spending over time, revenue growth over time, spending per student, and change in spending per student over time. Staff adjusted financial data for inflation using the June 2025 consumer price index (CPI) as the base.

To ensure that measures of college efficiency fully accounted for the number of students community colleges were serving, JLARC staff developed a method to calculate the approximate credit hours for students enrolled in FastForward non-credit courses and then calculate the equivalent number of full-time equivalent (FTE) students for each college's FastForward enrollment. JLARC staff assumed that on average each student enrolled in a FastForward course was taking 82.5 contact hours. If each credit hour is the equivalent of 15 hours of contact hours, then each FastForward student took the equivalent of 5.5 credit hours. If a FTE student takes 30 credit hours in an academic year, then each FastForward student was assumed to be the equivalent of 0.1833 FTE students. JLARC staff used this methodology to calculate the equivalent FTEs for each college's FastForward enrollment and add that to each college's credit FTEs.

Information collection instruments

JLARC staff administered two information collection instruments, one to all 131 public school divisions and one to all 23 community colleges.

Dual enrollment instrument

This instrument, distributed to all 131 public school divisions, requested information about dual enrollment teachers, students, and capacity and demand for dual enrollment. Responses were received from 96 school divisions. The information collected included the number of high school staff that taught dual enrollment courses, any difficulties experienced by divisions in recruiting and training dual enrollment certified teachers, the number of students with GPAs (at least 3.0 and at least 2.0) that qualify for dual enrollment, and capacity for dual enrollment within each school division.

Course design and advising instrument

This instrument, distributed to all 23 community colleges, collected information about course design and development, course and faculty assessment (especially for online classes), and advising. Responses were received from 20 colleges. The information gathered included the availability of resources for developing online courses, resources and practices for monitoring online courses, use of best practices in developing and monitoring online courses, and advising resources and practices.

Review of documents and literature

JLARC reviewed other documents and literature pertaining to community college enrollment, online education, career and technical education, dual enrollment, community college efficiency, and financing, such as:

- Virginia laws, regulations, policies, and guidance documents;
- prior studies, research, reports, best practices, and media on issues related to community colleges, online education, career and technical education, dual enrollment, college sustainability, advanced program (AP, IB, etc.) participation, community college regionalization, and community college funding in Virginia and the U.S.;
- GO Virginia regional growth and diversification plans to determine if top CTE programs by GO Virginia region align with skills gaps and targeted industries identified in the plans particularly for programs where CIP codes have no matching occupation code; and
- national, state, and local media reports.

Appendix C: Agency responses

As part of an extensive validation process, the state agencies and other entities that are subject to a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff sent an exposure draft of the full report to the secretary of education and Virginia Community College System (VCCS), and a relevant section of the draft report to the State Council of Higher Education for Virginia (SCHEV).

Appropriate corrections resulting from technical and substantive comments are incorporated in this version of the report. This appendix includes a response letter from the secretaries of education and finance, VCCS, and SCHEV.

COMMONWEALTH of VIRGINIA
Office of the Governor

Aimee Rogstad Guidera
Secretary of Education

September 26, 2025

Hal E. Greer
Director, Joint Legislative Audit and Review Commission
919 E Main St, Suite 2101
Richmond, VA 23219

Re: Response to the Joint Legislative Audit and Review Commission's (JLARC) report on *Virginia's Community Colleges and the Changing Higher Education Landscape*

Dear Director Greer,

Thank you for the thoughtful analysis in JLARC's report on Virginia's community colleges. The strength of these institutions is central to Governor Youngkin's vision that every Virginia student graduates prepared for life, whether that means a high-value job, a successful transfer to a four-year institution, or military service. As more Virginians earn industry credentials, enter apprenticeships, and pursue dual enrollment and other early-college opportunities, the Virginia Community College System (VCCS) becomes even more vital to our shared success.

The Youngkin administration has been a heavily engaged partner and vocal supporter of the new VCCS strategic plan, which prioritizes more proactive and data-driven collaboration by intentionally blurring the lines among K-12, four-year institutions, employers, and regional workforce efforts. The report's focus on increasing access to dual enrollment, improving efficiency, delivering stronger outcomes, and more transparency strongly aligns with our agenda, our conversations with the Council of Presidents over the past three and a half years, and the Op-Six planning process. To that end, we have created comprehensive data packs for every higher education institution which are publicly available. We also hold Quarterly Management Review meetings with VCCS and are working to collect more detailed enrollment data to better understand headcount on campus and funding needs given the rapidly changing nature of higher education.

In that spirit, I offer the following responses to the findings of the report.

I. **Efficiency**

- **Advance regional models to improve efficiency and access**
  A regional structure reduces duplication, aligns programs with local labor markets, and supports students with clearer, faster pathways. Building on the Northern Virginia model, we support "one college per GO Virginia region," with the flexibility to incorporate Higher Education Centers where appropriate. This preserves a "one system" ethos while providing transparency on individual college performance and cost while ensuring alignment with regional labor market needs. It is clear that smaller community colleges spend more per student and would benefit from enhanced regionalization, additional investment in data and financial systems at the central office, and a comprehensive review of space utilization.
- **Prioritize efficient space utilization**
  We must work to better utilize the facilities we already have. Given VCCS trends in low space utilization and the high percentage of fully remote students on many campuses, we recommend a statewide audit of space utilization, simulation equipment, and instructional staffing across all program offerings. SCHEV currently collects aggregate space utilization data across higher education, which should be part of this effort.
- **Strengthen capacity according to demand in high-need fields**
  We support expanded capacity and additional instructors and simulation space to meet increasing demand for short-term credentials. Mapping capacity across school divisions, regional career and technical education centers, VCCS, and Higher Education Centers will target new investment where it is most needed, produces the greatest value, and ensures coordination rather than duplication.
- **Streamline instructor qualification pathways for dual enrollment**
  Given the need to grow early-college access, the Commonwealth should evaluate alternatives to graduate degree requirements where equivalent content expertise and quality assurance can be demonstrated. JLARC's discussion provides a useful impetus to revisit these rules in a way that protects rigor and expands opportunity.
- **Avoid large carryover balances**
  VCCS has consistently carried over large unspent balances averaging over $160 million in unspent appropriations annually since 2022. We have asked the Chancellor to conduct a thorough review of these fund balances, indicating amounts that are legally obligated to specific projects identified in the report and create a detailed allocation plan for unobligated balances. Until these details are received, additional funding should be paused given the magnitude of these General Fund supported balances.

II. Transparency & Data Quality

- **P-20W data governance and modern student information systems**
  Better decisions begin with better data. VCCS must work to build high quality data systems to inform system-wide and local decision-making. We also support efforts to enhance data governance and modernize student information system infrastructure so all stakeholders can access timely, linked information on inputs and outcomes across education and workforce development programs and initiatives. This will strengthen evaluation and enable quicker course corrections.
- **Elevate transparency through publishing outcomes**
  We are actively working to expand SCHEV's College Outcomes portal so the public can see both system-level and individual college measures for enrollment, completion, transfer, credential attainment, employment, and earnings. Disaggregating enrollment by full/part-time and modality in six-year plans will further improve comparability across individual institutions.
- **Show program-level value and align funds accordingly**
  We share the goal of ensuring that public dollars flow to pathways that reliably lead to success and economic mobility. This includes clear, program-level value signals for students, families, and employers, informed by labor market data and transparent outcomes reporting.

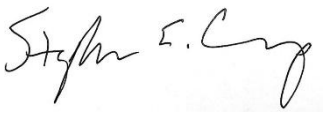
III. Accountability

- **Building on FastForward through outcomes-based funding**
  FastForward's pay-for-performance structure offers a practical model for tying resources to credential attainment, employment, and wage progression. We support exploring outcomes-based elements within the broader VCCS funding formula, carefully piloted and phased to protect access while improving results.
- **Strengthen FastForward evaluation**
  Tracking job placement and retention, employer demand for specific credentials, and three-to-five-year wage gains will sharpen program design and accountability. This is especially timely as we align secondary credentials with VCCS to create seamless career pathways.
- **Ensure quality regardless of the delivery of education**
  As colleges and school divisions expand virtual options to meet College and Career Ready Virginia requirements, access, outcomes and quality must be closely monitored. Additionally, ensuring transparent division and state-level reporting will help institutional leaders target proper supports and sustain high quality across all modes of delivery.
- **Document and scale effective local practices**
  We appreciate JLARC's attention to practices that move the needle, such as scheduling credentialing exams on the last day of class and bundling exam costs into tuition. Highlighting these examples helps institutions learn from peers and scale success statewide.

Virginia's community colleges are indispensable to our goal of preparing every graduate for life. Your report affirms the course we have set and gives us momentum to accelerate the work. Building on the Commonwealth's nationally recognized leadership in data and transparency, we will continue to expand capacity where demand is greatest, align credentials to workforce needs, and ensure career pathways are coherent, accessible, and rigorous.

We are grateful for JLARC's thorough analysis and for the continued leadership of our partners across VCCS, SCHEV, colleges, local school divisions, and industry.

With appreciation,



Aimee R. Guidera
Secretary of Education

Stephen E. Cummings
Secretary of Finance

CC: Emily Anne Gullickson
Virginia Superintendent of Public Instruction

September 26, 2025

Mr. Hal Greer
Director, Joint Legislative Audit and Review Commission
919 East Main Street
Richmond, Virginia 23219

Dear Director Greer,

On behalf of the Virginia Community College System, I extend my sincere gratitude to you and your team for your diligent engagement and thorough review reflected in the exposure draft, Virginia's Community Colleges and the Changing Higher Education Landscape. Your commitment to a fair and comprehensive evaluation is deeply appreciated, and the process has greatly benefited from JLARC's thoughtful approach and collaborative spirit.

I am pleased to acknowledge the report's alignment with my vision for Virginia's 23 community colleges—a vision centered on delivering consistent, high-quality, future-ready education and robust workforce development programs to all Virginians. The findings and recommendations in the draft reinforce our shared dedication to ensuring that every student has access to the opportunities they need to succeed in a rapidly evolving economy.

The importance of an efficient, transparent, and unified community college system cannot be overstated. As we look ahead, the Virginia Community College System remains steadfast in its commitment to continuous improvement and accountability, always striving to meet the needs of our students, employers, and communities. We recognize that our ongoing success will be shaped by the strength of our partnerships and the clarity of our shared objectives.

With the release of this report, I will work closely with the State Board for Community Colleges in reviewing and prioritizing the report's recommendations. The Virginia Community College System is eager to further enhance the consistency, accessibility, and effectiveness of community college education across the Commonwealth.

Thank you again for your leadership and for advancing this important conversation. Please extend my appreciation to your entire team for their professionalism and dedication throughout this process.

Respectfully,

David A. Doré

David Doré, Ed.D.
Chancellor
Virginia Community College System

COMMONWEALTH of VIRGINIA

A. Scott Fleming
Executive Director

STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA
James Monroe Building, 101 North Fourteenth Street, Richmond, VA 23219

(804) 225-2600
www.schev.edu

Harold E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street Suite 2101
Richmond, VA 23219

Dear Mr. Greer,

On behalf of SCHEV, thank you for the opportunity to review the draft JLARC report on Virginia's Community Colleges and the Changing Higher Education Landscape**.** We appreciate the thoughtful attention and dedication of your staff in examining this important and timely topic.

In general, I would like to call attention to our online data portal for college outcomes (collegeoutcomes.schev.edu), which receives light reference in the report. Last November (2024), SCHEV released online data profiles for each of our public colleges and universities, and VCCS. Moving forward, our intention is to provide similar data for each of Virginia's public two-year institutions. This data visualization is leading the nation in terms of transparency of student outcomes, administrative expense and operational efficiency. Utilization of these dashboards may support this and future JLARC efforts in higher education and workforce areas.

Further, I would suggest that SCHEV and JLARC staff follow up on what additional data is currently collected by SCHEV, or could be collected by SCHEV, that would further enhance the utility of these data dashboards with respect to VCCS, its institutions and its students. We may find considerable overlap in available data that would prove helpful for the various stakeholders engaged in supporting Virginia students.

In terms of specific comments, we'd provide the following notes. The report notes that five community college locations enroll fewer than 25 percent of their students in- person at the college's physical location. Given JLARC's parallel work on capital allocations for the Commonwealth, the declining number of public K-12 students, and the overall population demographics impacting higher education enrollment, this may provide an opportunity for discussion of the best use of the state's limited resources to support higher education needs.

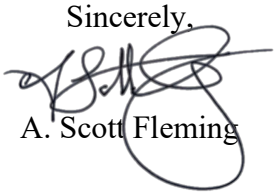
Regarding Recommendation 4(ii), which suggests Fast Forward credentials be aligned with employer demands, alignment of the program to workforce demand should be a priority for these programs, particularly where resources have not kept pace with demand. Students should be able to enroll in these programs with confidence that they will, in fact, produce stronger labor market outcomes – clarifying the process for establishing employer demand for these programs may be worth further exploration if there is anything less than clear data supporting specific programs' alignment to industry demand.

Regarding Recommendation 6, which proposes that the State Board for Community Colleges direct staff to collect utilization data on non-credit courses and alternative uses, could yield a more comprehensive and accurate reflection of enrollment and outcomes measures, demand for specific programs, credential completion rates, and space utilization across the Virginia Community College System (VCCS).

As the landscape of post-secondary education continues to evolve, non-credit offerings—including certificates, digital badges, and other credentialing programs—play an increasingly vital role in promoting economic mobility. Collecting data on these types of usage will help identify opportunities to optimize underutilized spaces and ensure that facilities are aligned with emerging educational demands. Given SCHEV's existing role in collecting classroom and lab utilization data, enhanced coordination and consultation between SCHEV and VCCS could lead to more strategic resource allocation in data collection and improved space management system wide.

Thank you for the opportunity to review the exposure draft. We appreciate the information presented and the thoroughness of the JLARC team in assembling the conclusions in a way that highlights the most salient issues and look forward to future collaboration on this and other efforts.

Sincerely,



A. Scott Fleming

Appendix D: Analysis of outcomes for students in online asynchronous courses

JLARC staff conducted regression analyses to compare outcomes for students by modality (e.g., in-person, online asynchronous, or online synchronous). Staff used VCCS data for students and courses from 13 academic terms for this analysis, which included academic year 2018 to academic year 2024. Spring 2020 through fall 2021 academic terms were excluded from the analysis because of disruptions to regular instruction and requirements to take online courses during the pandemic.

Whether or not a student takes a class in-person or online is often not a random choice. The reasons students may choose a given class format, such as motivation, location, or ability, could influence their potential academic outcomes in addition to course delivery format. Course features, such as subject material or curriculum design, could also impact student performance. JLARC staff used several strategies to at least partially address these potential biases in the analysis.

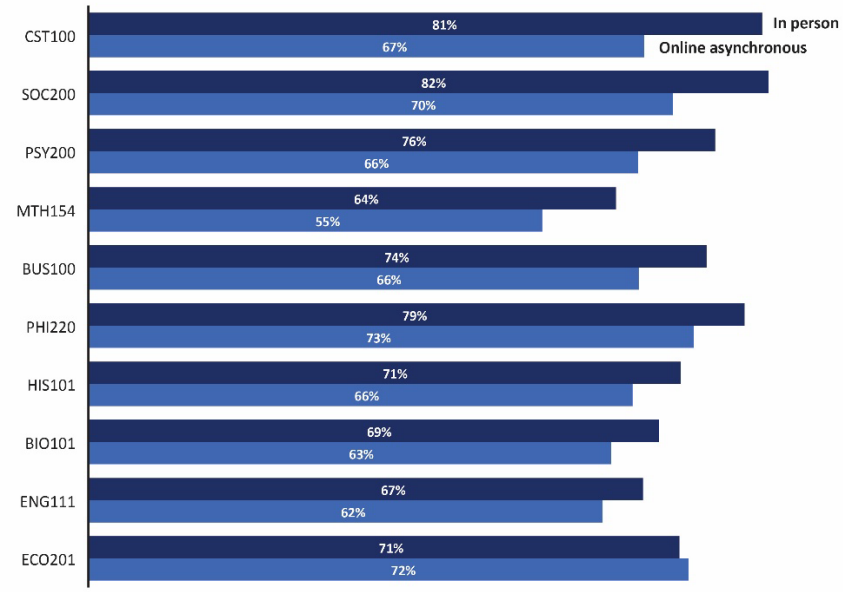
JLARC staff analyzed 276,711 individual course registrations from 163,518 individual students. Students were selected into the sample if, during the time period for the analysis, 1) they took at least one course in person and one online (synchronous or asynchronous) in the semesters used in the analysis and 2) were transfer or applied associate degree students, since they take some of the same courses. The analysis did not include dual enrollment students or students seeking a career studies certificate or other career-oriented certificate.

The analysis was limited to 10 of the top 20 general education courses with the highest registrations in fall 2024. These courses are typically either intended for transfer to a four-year institution or to fulfill requirements for an associate degree. JLARC staff chose these courses to provide a cross-section of courses that illustrates student outcomes in multiple subjects, rather than choosing multiple courses from the same subject. The courses included:

- English (ENG) 111: College Composition 1
- Biology (BIO) 101: Foundations of Biology (lecture component only)
- Math (MTH) 154: Quantitative Reasoning
- Communication Studies and Theater (CST) 100: Principles of Public Speaking
- Business (BUS) 100: Introduction to Business
- History (HIS) 101: Western Civilizations Pre-1600 CE
- Sociology (SOC) 200: Introduction to Sociology
- Psychology (PSY) 200: Principles of Psychology
- Economics (ECO) 201: Principles of Macroeconomics
- Philosophy (PHI) 220: History of Western Philosophy

Figure D-1 includes a description of the difference in pass rates for in-person and asynchronous online students in these 10 courses over the time period analyzed.

FIGURE D-1
Difference in pass rates for sample used in regression modeling



SOURCE: JLARC analysis of Virginia Community College System course, class, and student data, fall 2018 through spring 2025. Analysis excludes fall 2020 through fall 2021 because of disruptions to regular instruction and requirements to take online courses during the pandemic.

Regression analysis results

Logistic regression was used for this analysis. Success (a grade of A, B, C, or P) or failure (a grade of D or F or a withdrawal from the course) served as the dependent variable. A grade of D was defined as a "failure" because this grade typically will not transfer for credit to another institution, and programs at the community colleges often require a student to earn a grade of C or better for satisfactory academic progress. Withdrawal from the course was characterized as "failure" because the student receives no credit for the course and does not receive a refund of tuition and fees. This definition aligns with academic literature about online education. Table D-1 provides more details about control variables used in the analysis, and Table D-2 provides detailed regression results. Staff also conducted panel regressions with student fixed effects, which control for unobserved, time-invariant student characteristics, to confirm the findings. Reference categories are provided in parentheses.

TABLE D-1
Independent variable definitions for spending and growth regressions

Variable	Coefficient
Modality	In-person, online asynchronous, online synchronous, or hybrid (in-person=0)
Gender	Male or female (male=0)
Race	White, Black, Hispanic, Asian, or another race (white=0)
Developmental education	Whether a student ever took a developmental education course (yes=0)
Financial aid	Whether a student received financial aid (yes=0)
Faculty type	Full-time or part-time (adjunct) faculty (full-time=0)

Mother's and father's education levels (2 variables)	Bachelor's or higher, associate degree, some college, high school or GED, or did not finish high school (bachelor's or higher=0)
Age	24 or younger or over age 24 (over age 24=0)
Student time status	Full-time or part-time student (part-time=0)
Prior dual enrollment	Whether a student took dual enrollment course(s) in high school (yes=0)
Retake	Whether the course was a retake (yes=0)
College	Dummy variable; base value=New River Valley because of order of college numbers in VCCS data
Term	Dummy variables for academic term (base is Spring 2018)
Course	Dummy variable for course (ENG111=0)
Race - financial aid	Interaction variable for race and receipt of financial aid
Gender - financial aid	Interaction variable for gender and receipt of financial aid
Race - developmental education	Interaction variable for race and whether a student ever took a developmental education course
Financial aid - developmental education	Interaction variable for receipt of financial aid and whether a student ever took a developmental education course

SOURCE: JLARC synthesis of Virginia Community College System course, class, and student data, fall 2018 through spring 2025.

In general, odds ratios less than 1 mean that the likelihood of a particular outcome is less than the other possible outcome in the regression. For instance, the odds ratio of 0.69 for the asynchronous modality means that asynchronous students are markedly less likely to pass than their peers in person, and the p-value of less than 0.01 means this is a statistically significant relationship. For synchronous courses, the odds ratio of 1 means that the odds are nearly the same for success for synchronous students as they are for in-person students.

In this case, the odds of an asynchronous student passing a course are lower than an in-person student, all other factors being equal (e.g., a student of the same race and gender in the same course).

TABLE D-2
Logistic regression for online education outcomes compared to in person (n=276,711)

Variable	Odds ratio	Standard error	z	P>|z|	LB	UB
Modality						
Asynchronous	0.69	0.01	-32.77	<0.01	0.68	0.71
Synchronous	1.00	0.02	-0.21	0.84	0.96	1.03
Hybrid	0.85	0.02	-8.14	<0.01	0.82	0.89
Female	1.29	0.02	19.66	<0.01	1.26	1.33
Race						
Black	0.54	0.01	-27.75	<0.01	0.51	0.56
Hispanic	0.74	0.02	-14.83	<0.01	0.71	0.77
Asian	0.95	0.03	-1.68	0.09	0.90	1.01
Another race	0.78	0.02	-8.29	<0.01	0.73	0.83
Took developmental course	0.67	0.01	-23.80	<0.01	0.65	0.69
Financial aid	0.98	0.02	-0.83	0.41	0.95	1.02
Adjunct	1.07	0.01	7.21	<0.01	1.05	1.09
Mother's education						
Some college	0.94	0.02	-3.68	<0.01	0.91	0.97

HS or GED	0.90	0.01	-6.93	<0.01	0.88	0.93
DNF HS	0.91	0.01	-7.57	<0.01	0.88	0.93
Unknown	0.94	0.02	-3.43	<0.01	0.91	0.97
Father's education						
Some college	0.93	0.02	-4.33	<0.01	0.89	0.96
HS or GED	0.88	0.01	-8.39	<0.01	0.86	0.91
DNF HS	0.88	0.01	-9.48	<0.01	0.86	0.91
Unknown	0.83	0.01	-10.54	<0.01	0.81	0.86
Age 24 or younger	0.63	0.01	-35.47	<0.01	0.62	0.65
Full-time student	1.38	0.01	32.79	<0.01	1.35	1.40
Prior dual enrollment student	1.16	0.02	7.44	<0.01	1.11	1.20
Retake course	0.51	0.01	-51.68	<0.01	0.50	0.53
College						
Southside	1.32	0.08	4.90	<0.01	1.18	1.48
Paul D. Camp	1.29	0.08	4.19	<0.01	1.15	1.46
Rappahannock	1.39	0.08	5.67	<0.01	1.24	1.56
Danville	1.02	0.05	0.47	0.64	0.93	1.13
Northern Virginia	1.15	0.04	4.43	<0.01	1.08	1.22
Piedmont	1.17	0.05	4.04	<0.01	1.08	1.26
Reynolds	1.25	0.05	6.08	<0.01	1.16	1.34
Eastern Shore	1.44	0.17	2.98	<0.01	1.13	1.82
Patrick & Henry	1.16	0.05	3.28	<0.01	1.06	1.27
Virginia Western	1.02	0.04	0.56	0.57	0.95	1.10
Mountain Gateway	1.30	0.09	3.76	<0.01	1.14	1.50
Wytheville	1.39	0.08	6.02	<0.01	1.25	1.55
Brightpoint	1.31	0.04	7.76	<0.01	1.22	1.40
Blue Ridge	0.91	0.04	-2.44	0.02	0.84	0.98
Central Virginia	1.13	0.05	2.68	<0.01	1.03	1.23
Virginia Peninsula	1.10	0.04	2.82	0.01	1.03	1.18
Southwest	0.95	0.05	-1.15	0.25	0.86	1.04
Tidewater	1.09	0.03	2.55	0.01	1.02	1.16
Virginia Highlands	0.87	0.04	-2.72	<0.01	0.79	0.96
Germanna	1.27	0.05	6.70	<0.01	1.18	1.36
Laurel Ridge	1.21	0.04	5.17	<0.01	1.12	1.30
Mountain Empire	0.76	0.05	-4.40	<0.01	0.67	0.86
Southside	1.32	0.08	4.90	<0.01	1.18	1.48
Term						
Spring 2019	0.95	0.02	-2.60	<0.01	0.91	0.99
Summer 2019	1.60	0.05	13.73	<0.01	1.49	1.71
Fall 2019	1.06	0.02	3.04	<0.01	1.02	1.11
Spring 2022	0.94	0.02	-2.56	0.01	0.90	0.99
Summer 2022	1.51	0.06	10.99	<0.01	1.40	1.62
Fall 2022	0.88	0.02	-6.59	<0.01	0.85	0.92
Spring 2023	1.01	0.02	0.41	0.68	0.97	1.05
Summer 2023	1.64	0.06	14.62	<0.01	1.54	1.75
Fall 2023	1.03	0.02	1.59	0.11	0.99	1.07
Spring 2024	1.10	0.02	4.80	<0.01	1.06	1.15
Summer 2024	1.60	0.05	14.51	<0.01	1.50	1.70

Fall 2024	1.10	0.02	5.24	<0.01	1.06	1.14
Spring 2025	1.17	0.02	7.55	<0.01	1.13	1.22
Course						
BIO101	0.99	0.01	-0.85	0.40	0.96	1.02
MTH154	0.80	0.01	-14.65	<0.01	0.78	0.83
PSY200	1.45	0.02	21.45	<0.01	1.40	1.50
CST100	1.48	0.03	21.65	<0.01	1.43	1.54
SOC200	1.85	0.04	29.60	<0.01	1.78	1.93
HIS101	1.19	0.02	8.94	<0.01	1.14	1.23
PHI220	1.62	0.04	21.08	<0.01	1.55	1.70
ECO201	1.42	0.03	16.99	<0.01	1.36	1.48
BUS100	1.45	0.03	17.55	<0.01	1.39	1.51
Interaction variables						
Black#Financial aid	0.99	0.03	-0.38	0.71	0.94	1.04
Hispanic#Financial aid	1.05	0.03	2.11	0.03	1.00	1.10
Asian#Financial aid	1.32	0.05	7.93	<0.01	1.23	1.41
Another race#Financial aid	0.99	0.04	-0.39	0.69	0.91	1.06
Female#Financial aid	0.93	0.02	-3.98	<0.01	0.90	0.96
Black#At least 1 dev. ed	1.20	0.03	7.52	<0.01	1.15	1.26
Hispanic#At least 1 dev. ed	1.06	0.03	2.31	0.02	1.01	1.11
Asian#At least 1 dev. ed	1.07	0.04	1.96	0.05	1.00	1.15
Another race#At least 1 dev. ed	0.99	0.04	-0.25	0.80	0.92	1.07
Financial aid#At least 1 dev. ed	1.01	0.02	0.71	0.48	0.98	1.05
Constant	4.01	0.15	36.43	<0.01	3.72	4.32

Pseudo-R^2: 0.053.

SOURCE: JLARC analysis of Virginia Community College System course, class, and student data, fall 2018 through spring 2025. Analysis excludes Fall 2020 through Fall 2021 because of disruptions to regular instruction and requirements to take online courses during the pandemic.

Appendix E: Revenue changes at VCCS

Community colleges' student and program enrollment changes have implications for the system's revenue levels and composition, and these changes could make it necessary to fundamentally revisit the state's approach to funding VCCS in the future. Virginia does not currently use a funding formula to determine appropriations for public higher education institutions, including the community colleges, and instead uses a "base plus" approach to determine state appropriations for higher education. This approach uses appropriation levels from previous years as the "base" and increases or decreases appropriations for the next year.

Increased state funding has helped minimize tuition increases, but colleges now rely more heavily on general funds

State funding for community colleges has increased substantially in recent years. Collectively, state funding for the 23 colleges increased 29 percent from FY18 to FY24 (adjusted for inflation). Absent this increase, colleges would have had to raise tuition or reduce spending during this time period. While state funding increased, tuition revenue (the other major source of revenue for colleges) declined 45 percent (adjusted for inflation).

This was partially an intentional policy decision to stabilize tuition rates at all higher education institutions. Appropriation Act language in recent years has directed colleges to minimize or eliminate tuition increases for students and provided funds to help colleges stabilize tuition. As a result, VCCS tuition rates remained constant between academic years 2018-19 and 2022-23. Between 2022–23 and 2024–25, tuition rates increased about 6 percent (not adjusting for inflation). This policy decision increased state general fund revenues and reduced tuition revenues.

Consequently, over the past seven years, colleges have begun to rely more heavily on state funds. The proportion of colleges' total revenue from state funds increased from 38 percent to 50 percent from 2018 to 2024 (Figure E-1). This occurred in part because the amount of state funds increased, but also because the amount of tuition revenue decreased.

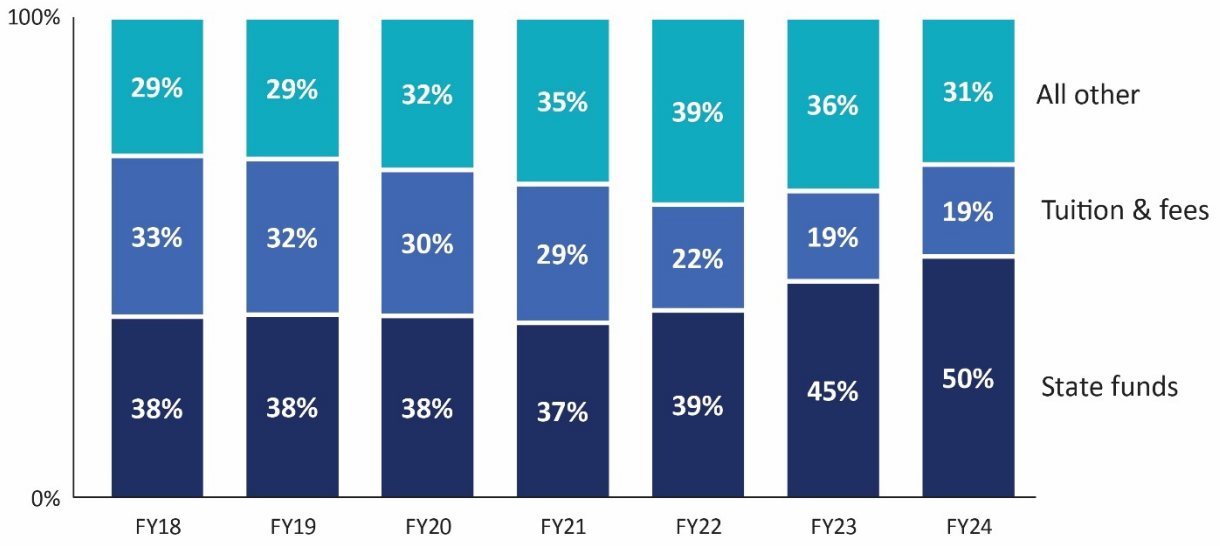
This increasing reliance on general funds occurred at almost all individual colleges, to varying degrees. State funds increased as a proportion of total revenue at all but one college (Eastern Shore), ranging from a 2 percent to 19 percentage point increase. Tuition decreased as a proportion of total revenue in at all but one college (Paul D. Camp), ranging from a 4 percent to 25 percentage point decrease.

Community colleges in other states with similar financing mechanisms to Virginia tended to have a slightly lower reliance on state funds appropriations than Virginia community colleges. Colleges in 19 states[1] with similar funding structures to Virginia received 37 percent of their funding from state funding appropriations in 2023, according to data from the National Center for Educational Statistics (NCES). Tuition and fees accounted for a similar proportion of revenues at community colleges in

[1] The 19 other states used for this comparison were Alabama, Colorado, Georgia, Hawaii, Indiana, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, New Hampshire, North Dakota, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Washington, and West Virginia. These states were selected because, like Virginia, they do not require their local governments to contribute funding to their community colleges.

other states with an average of 17 percent of revenues coming from tuition and fees in 2023 (Figure E-1).

FIGURE E-1
State share of revenue has grown



SOURCE: JLARC staff analysis of VCCS annual financial statements, FY18–FY24.
NOTE: Includes only revenues for the 23 colleges and excludes revenues for system office and shared services center. Revenues are adjusted for inflation.

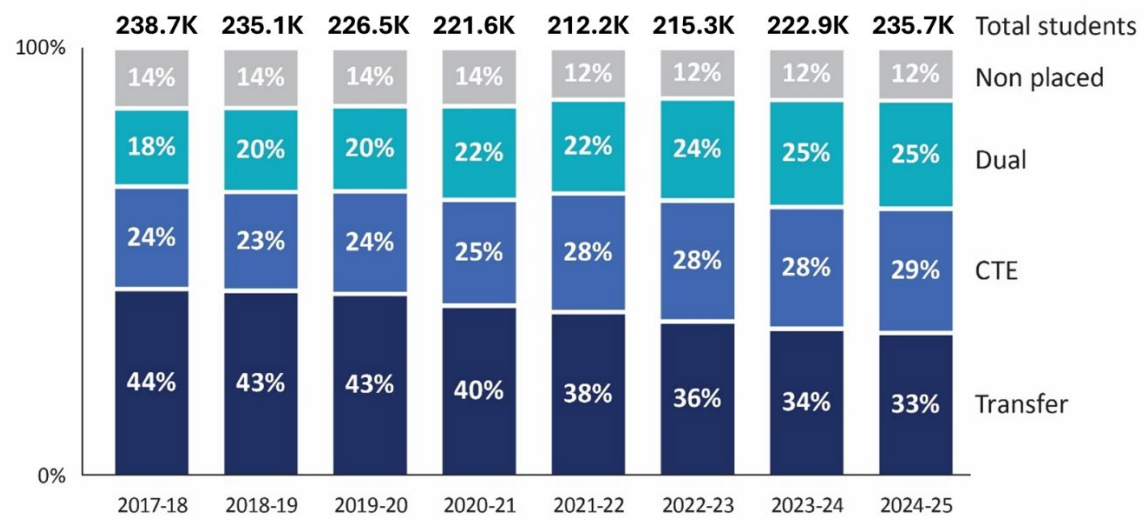
Enrollment changes have made subsidies across programs difficult to maintain, which could hinder continued shift to CTE

Historically, VCCS colleges cross-subsidize their programs to balance their finances, whereby less expensive programs provide their excess revenues to fund more expensive programs. As enrollment has declined and the enrollment composition has shifted, these historical cross-subsidies have become more difficult to maintain. If these enrollment trends continue as expected, this dynamic will increasingly stress college finances.

Currently, community colleges receive the same funding for each full-time equivalent student. The base plus funding approach essentially provides the same amount of state funds per full-time equivalent student, regardless of program. Similarly, VCCS charges students the same tuition per credit hour tuition, irrespective of which courses they take.

Several trends and policy decisions may make it more difficult to use the state's current funding approach moving forward. Chief among these is the shift in the composition of students and courses as enrollment has declined. There are about 27,000 fewer academic transfer students since 2017–18. During this time period, CTE enrollment and dual enrollment have increased (Figure E-2).

FIGURE E-2
Composition of enrollment has changed as total enrollment has declined



SOURCE: JLARC analysis of VCCS student enrollment data, 2017-18 through 2024-25.
NOTE: Figures represent total headcount enrollment. Enrollment includes dual enrollment students and non-credit FastForward students (categorized as CTE students in this graphic).

Decline in academic transfer students is eroding subsidization of higher cost CTE students

Academic transfer courses are typically less expensive for colleges to teach than CTE courses, but students are charged the same amount of tuition. Across all VCCS courses in FY24, colleges spent an average of $242 per credit hour for academic transfer courses compared with $466 per credit hour for CTE courses; however, colleges received an average of $341 in revenue per credit hour for all courses. Therefore, transfer courses have $126 in excess revenue per credit hour, and CTE courses have a deficit of $99 per credit hour. Costs of specific types of courses vary dramatically though. For example, among CTE courses, fire safety courses cost an average of $364 per credit hour while dental hygiene courses cost an average of $1,588 per credit hour. The cost of academic transfer courses varies too, but not as dramatically as CTE courses. For example, the average cost per credit hour for an English class is $205, while the average cost per credit hour for a chemistry class is $398.

Historically, community colleges could subsidize across programs because they taught more credit hours of lower cost academic transfer courses than higher cost CTE courses. However, the 28 percent decline in academic transfer students is eroding this historical subsidy, which is creating at least two problems. First, colleges are collecting less tuition from academic transfer students, but the increase in state funds has been somewhat masking this trend. Second, colleges are having difficulty sustaining or expanding credit CTE programs because these programs do not bring in enough funding to support themselves.

These enrollment trends are unlikely to abate soon, and VCCS's enrollment composition is likely to continue shifting away from academic transfer students to CTE and dual enrollment students over the next several years. If students and families continue to place less value and emphasis on earning a

four-year degree, VCCS could see additional declines in enrollment for academic transfer students who currently account for the largest portion of VCCS's enrollment.

To help mitigate this challenge, VCCS is considering charging relatively low course fees for courses in certain CTE areas. The fee amounts contemplated (e.g., $25 or $50 per credit hour) are relatively modest, and it is unclear whether these fees can make a material difference. Additionally, the programs under consideration for course fees are in many occupations with relatively high employer demand and a large number of jobs, precisely the types of fields that state policy has been encouraging students to enter. For example, fees are being considered for healthcare (e.g., practical nursing, dental hygiene, radiography), skilled trades (e.g., automotive, diesel engine, electrical, welding), and advanced manufacturing (e.g., instrumentation, machine technology). These course fees could discourage student enrollment in these fields, which may have some of the greatest potential to help students attain employment and increase their earning potential. The State Board for Community Colleges voted to conceptually approve moving forward with developing an approach to course fees for certain CTE programs that would begin to be phased beginning in academic year 2026–27.

Some states, such as North Carolina, are considering adjusting their funding model to reflect these revenue changes and better incentivize expanding or creating new CTE courses. North Carolina's legislature is evaluating a proposal to differentiate the state's community college funding per student, with more funding for programs that prepare students for jobs in fields with high workforce demand. Texas introduced a new funding model for its community colleges in 2023 that provides funding to colleges based on outcomes (e.g., number of high-demand credentials produced, number of successful transfers to a four-year institution, number of dual enrollment students completing a certain number of credit hours) rather than enrollment. In both cases, additional funding is needed to transition to a new financial model. In Texas, the state legislature appropriated an additional $210 million for community colleges than in the previous year. In North Carolina, the community college system estimates it will need $93 million in additional state appropriations annually to transition to a new funding model.

Colleges will no longer charge students for dual enrollment courses but still receive funds through base adequacy formula

Another changing revenue subsidy is related to colleges' fastest growing student population. Dual enrollment has grown 26 percent since 2018. Until recently, students and school divisions would pay community colleges varying amounts for student participation in dual enrollment programs. The state's current funding formula for community colleges also provides funding for these students. Relative to other types of courses taught by college faculty on the campus or online, these dual enrollment courses cost a college far less than other courses.

As of fall 2025, colleges will be prohibited from charging students for certain dual enrollment courses under the terms of CCRV. This is beneficial for students and reasonable given colleges' minimal costs related to dual enrollment courses. However, this will reduce tuition revenue for some colleges, which may necessitate reductions or shifts in other areas. As of spring 2025, nine colleges were not charging for dual enrollment. These colleges either never charged for dual enrollment or recently stopped. The revenue decline for these colleges is either not relevant or already absorbed. However, the other 14

have been charging anywhere between 2 percent and 30 percent of full tuition for dual enrollment; these colleges will lose revenue associated revenue.

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919 East Main Street Suite 2101 Richmond, VA 23219