

Report to the Governor and the General Assembly of Virginia

Operations and Performance of the Virginia Community College System

2017



Joint Legislative Audit and Review Commission

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Director

Hal E. Greer

Staff for this report

Tracey Smith, Associate Director
Jamie Bitz, Project Leader
Erik Beecroft
Nicole Gaffen
Bridget Marcek
Jordan Paschal
Nichelle Williams

Information graphics: Nathan Skreslet

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Summary: Operations and Performance of the Virginia Community College System

WHAT WE FOUND

A relatively low percentage of community college students attain a credential

Community college students' ability to earn credentials and degrees is important for the state's economy and for ensuring that the state and families receive a return on the significant financial investment made in pursuit of a higher education. This study found that just 39 percent of Virginia's community college students earned a degree or other credential, and this is also the case nationwide. Moreover, community college students accumulate nearly a semester's worth of excess credits by the time they earn a bachelor's degree.

VCCS's open enrollment policy is key to expanding access to higher education, but many students who enroll exhibit factors that challenge their ability to succeed. Compared to students at Virginia's public four-year institutions, community college students are more likely to be older, part-time, low-income, the first in their family to attend college, and require remedial course work in English and math. These circumstances are associated with negative student outcomes, and could inform a system-wide strategy for prioritizing academic support services for at-risk students who could benefit from regular, more comprehensive, and even mandatory services, particularly academic advising.

Many students are not receiving needed advising services

According to the research literature, students who use academic advising are more engaged and more likely to complete a credential. To improve student outcomes, community colleges must provide more intensive—and in some cases, mandatory—academic advising services for students. Colleges should be more strategic about how they structure their advising programs and require mandatory advising for some students. However, Virginia's community colleges do not have sufficient levels of staff to ensure that students receive the advising services that they need.

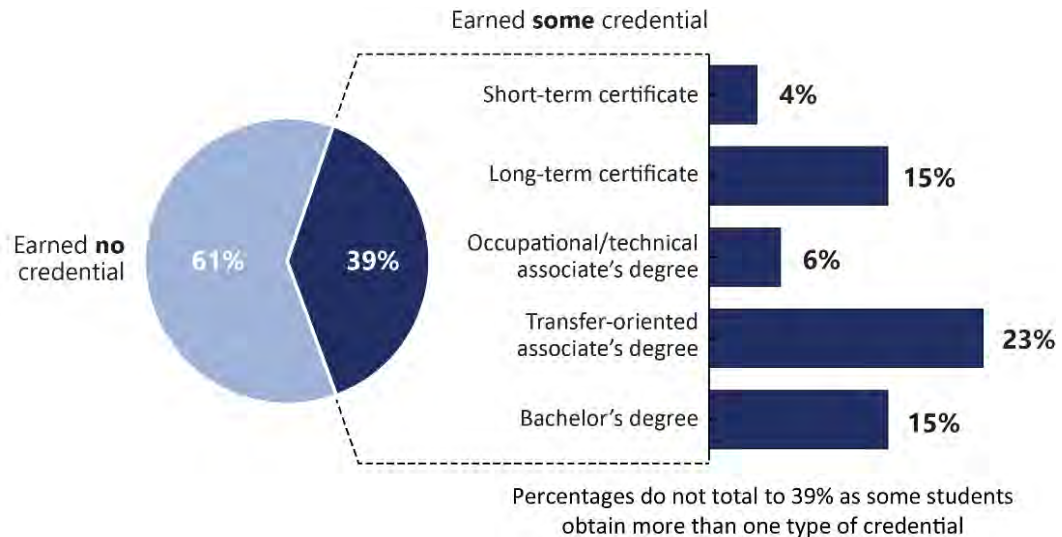
WHY WE DID THIS STUDY

In 2016 the Virginia General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to review the Virginia Community College System (VCCS) (HJR 157). JLARC had not reviewed VCCS since 1991, despite notable changes in the system's operations and mission. The study mandate specifically directs JLARC staff to review the usefulness and affordability of VCCS's education and training, collaboration with other educational institutions, VCCS's spending, and the adequacy of the support provided by the VCCS system office.

ABOUT VCCS

VCCS was created 50 years ago to improve Virginians' access to higher education and prepare them for the workforce. The system comprises 23 separate colleges on 40 individual campuses, with numerous additional off-campus centers. The colleges offer hundreds of associate's degrees and short- and long-term certificates. VCCS operates statewide but is governed centrally, and is the sixth largest state entity, in terms of total appropriations (\$1.7 billion, FY16). In terms of enrollment, VCCS is the state's largest institution of higher education, with a total enrollment of about 250,000 individual students.

Majority of community college students did not earn a community college credential or bachelor's degree



SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.
NOTE: Includes students who transferred to four-year institutions and obtained a bachelor's degree. Students in the JLARC cohort analysis left college before several VCCS student success initiatives were implemented. Student success rates may be higher for a cohort entering community college after these initiatives were begun. Analysis does not include students in non-credit programs, such as the Workforce Credentials Grant program.

Dual enrollment programs do not appear to consistently save students time or money in their pursuit of bachelor's degrees

The dual enrollment program is not clearly reducing the time or resources that students and the state invest in earning higher education credentials. Dual enrollment students take the same amount of time as non-dual enrollment students to earn a bachelor's degree. The majority of dual enrollment students accumulate more credits than non-dual enrollment students to attain a degree.

Community colleges do not consistently ensure the quality of dual enrollment courses

Faculty and staff at some of the state's four-year institutions expressed concerns about the quality of dual enrollment courses and a reluctance to accept them for credit. There are several recommended quality assurance practices that colleges could use, but none are used consistently. Implementing quality assurance practices could increase the likelihood that dual enrollment credits will be accepted by the state's four-year institutions.

Transfer process and resources are difficult for students to use

Transfer students who earned a bachelor's degree took longer and earned more credits than their counterparts who started college in a four-year institution. Transfer agree-

ments between the state's community colleges and four-year institutions have proliferated, are not kept up to date, and are not sufficiently accessible to students, making them difficult for students to understand and leverage. Streamlining transfer agreements and making them more accessible could improve the likelihood that Virginians who choose to pursue a bachelor's degree by starting first in community college will save time and money.

Continuing increases in community college tuition and fees may diminish affordability

VCCS is currently an affordable option for Virginians to pursue higher education, and the majority of students do not incur debt to finance their education. However, VCCS tuition and fees have grown from six percent of per capita disposable income to nearly 11 percent in the past 10 years. Ensuring affordability is a critical responsibility of the State Board for Community Colleges, and therefore the board should receive more comprehensive information about how proposed increases in tuition and fees would impact affordability, enrollment, and student success.

VCCS campus locations ensure access to college courses and training, but viability of smallest campuses should be examined periodically

VCCS has a relatively efficient structure compared to community college systems in other states, as measured by the number of colleges per capita and enrollments per college. VCCS also appears to have a sufficient number of colleges and campuses to adequately serve the state's population, and there do not appear to be any colleges or campuses that should be closed or consolidated at the present time. VCCS has no formal process for considering closure or consolidation, but it should develop one to ensure that the need for closure or consolidation can be examined periodically.

WHAT WE RECOMMEND

Legislative action

- Require each public four-year institution to (i) report to the State Council of Higher Education for Virginia (SCHEV) and VCCS on how dual enrollment courses transferred to their programs, (ii) develop a detailed description of the community college course work that will be credited to specific programs, (iii) maintain up-to-date transfer agreements, and (iv) annually provide new and revised agreements to VCCS.
- Require SCHEV to annually identify the college programs with the poorest transfer student outcomes.
- Require VCCS to maintain a single repository for all transfer agreements.

Executive action

- Develop a proposal for identifying high school students who are not prepared for college-level course work and actions that could be taken to improve college readiness.
- Develop standard criteria that colleges can use to identify students who are at risk of not succeeding in community college and a standard policy for colleges to follow to ensure that the most at-risk students receive proactive, individualized, mandatory academic advising and other academic services.
- Require colleges to use recommended quality assurance practices for dual enrollment courses and disclose more information about the transferability of dual enrollment courses.
- Present additional information to the State Board for Community Colleges to improve the board's understanding of the impact of tuition increases on affordability.
- Develop a formal policy and criteria for periodically examining the need to close or consolidate colleges or campuses.

The complete list of recommendations is available on page v.

Recommendations: Operations and Performance of the Virginia Community College System

RECOMMENDATION 1

The Virginia Community College System should develop criteria and guidelines that colleges can use to identify students who are at risk for not completing a degree or credential and could benefit from more regular, comprehensive support services.

(Chapter 2)

RECOMMENDATION 2

The Virginia Community College System and the Virginia Department of Education should develop a proposal for administering the Virginia Placement Test or comparable assessment to high school students. The proposal should include (i) how the test could be administered, in which grades and to which students; (ii) an estimate of the cost of administering the test; and (iii) actions to be taken to improve the college readiness of students whose assessment results exhibit the need for remediation. The proposal should be submitted to the House Education and Appropriations committees and Senate Education and Health, and Finance committees no later than September 1, 2018. (Chapter 2)

RECOMMENDATION 3

The Virginia Community College System should develop a system-wide policy to ensure that at-risk community college students receive proactive, individualized advising services at the most appropriate times. This policy should specify (i) the characteristics of students who should be required to meet with an academic adviser; (ii) the events or circumstances that trigger mandatory adviser meetings; and (iii) the adviser's role in subsequently monitoring student performance and intervening when appropriate.

(Chapter 2)

RECOMMENDATION 4

The Virginia Community College System should develop a proposal for improving the capacity of community colleges to provide proactive, individualized, mandatory advising services to students who are at risk for not completing a degree or credential and could benefit from more regular, comprehensive advising services. The proposal should be submitted to the House Education and Appropriations committees and Senate Education and Health, and Finance committees no later than September 1, 2018. (Chapter 2)

RECOMMENDATION 5

The Virginia Community College System should establish a policy requiring students to (i) attend orientation before enrolling in courses and (ii) complete the student development course during their first semester at a community college. This requirement should apply to students who are enrolled in for-credit degree or credential programs, who are at risk for not completing a degree or credential, and who could benefit from more regular, comprehensive support services. (Chapter 2)

RECOMMENDATION 6

The Virginia Community College System should develop a system-wide strategic plan that focuses exclusively on how the system will support student success. The plan should describe (i) how colleges will identify the factors associated with poor student outcomes and identify students who exhibit those factors; (ii) actionable strategies for mitigating the effects of those factors on student outcomes; (iii) a plan to implement each strategy; and (iv) how the impact of the strategies will be evaluated. The plan should be developed collaboratively with community college staff, including presidents, vice presidents for academic services, faculty members, and non-faculty professional advisers. (Chapter 2)

RECOMMENDATION 7

The General Assembly may wish to include language in the Appropriation Act to require the state's public four-year higher education institutions to report, for dual enrollment students, (i) the total number of dual enrollment credits on students' transcripts; (ii) the total number of those credits that were accepted for credit by the institutions; and (iii) whether the credits were applied to elective requirements, program requirements, or other requirements. This information should be reported to the State Council of Higher Education for Virginia (SCHEV) and the Virginia Community College System (VCCS) at the end of the 2017-18 academic year and in subsequent years as necessary to improve the quality of dual enrollment courses and the state's dual enrollment policies. VCCS and SCHEV should use this information to identify dual enrollment courses that are not routinely accepted for credit. (Chapter 3)

RECOMMENDATION 8

The Virginia Community College System, in coordination with the Virginia Department of Education, should modify the Governing Principles for Dual Enrollment to require the use of nationally recommended practices for dual enrollment programs. Required practices should include (i) periodic review of course materials, to ensure that content and rigor are aligned with the on-campus equivalent course; (ii) recurring, formal evaluation of instructors; and (iii) periodic classroom observation. (Chapter 3)

RECOMMENDATION 9

The Virginia Community College System, in coordination with the Virginia Department of Education, should modify the Governing Principles for Dual Enrollment to require community colleges and school divisions to clearly disclose to students taking these courses, for each dual enrollment course, the equivalent non-dual enrollment course, the academic and career and technical programs that will accept the course's credits, and the community colleges that offer those programs. (Chapter 3)

RECOMMENDATION 10

The Virginia Community College System should develop a database for maintaining information on all dual enrollment courses offered in the state. The database should include a description of each course, the location where it is taught, the sponsoring community college, the specific academic or career and technical programs that will accept the course's credits, and which community colleges offer those programs. (Chapter 3)

RECOMMENDATION 11

The General Assembly may wish to consider creating a financial assistance grant program to help high school teachers obtain credentials necessary to teach dual enrollment courses. (Chapter 3)

RECOMMENDATION 12

The Virginia Community College System, in coordination with the Virginia Department of Education, should collect data from each community college and each school division on the expenditures that are directly attributable to the dual enrollment program. This expenditure data should be used to develop a single, statewide dual enrollment funding formula and a tuition and fee structure that is consistent across all courses and colleges and that reflects the costs of operating a high-quality dual enrollment program. (Chapter 3)

RECOMMENDATION 13

The General Assembly may wish to amend the Code of Virginia to require the State Council of Higher Education for Virginia to develop guidelines for the state's public two- and four-year higher education institutions for developing program maps for transfer pathways. These guidelines should specify (i) the most commonly used transfer pathways for which program maps should be developed and (ii) standard content to be included in each program map. (Chapter 3)

RECOMMENDATION 14

The General Assembly may wish to amend the Code of Virginia to require that each public four-year institution in Virginia develop, in collaboration with the Virginia Community College System, program maps for transfer pathways. The program maps should be consistent with the guidelines to be developed by the State Council of Higher Education for Virginia (Recommendation 13). (Chapter 3)

RECOMMENDATION 15

The General Assembly may wish to amend § 23.1-908 of the Code of Virginia as follows: (i) to require that the Virginia Community College System (VCCS) develop and maintain a single online repository for all agreements, course equivalency tools, and other informational resources related to transferring from a community college to a public four-year institution; (ii) to require the State Council of Higher Education for Virginia to send to VCCS all the transfer resources that it has collected; and (iii) to require all public four-year higher education institutions to keep their transfer agreements updated and annually send to VCCS all new and revised transfer agreements and other transfer-related resources. (Chapter 3)

RECOMMENDATION 16

The General Assembly may wish to consider amending the Code of Virginia to require that the State Council of Higher Education for Virginia (SCHEV) annually identify the transfer pathways in which transfer students have poorer outcomes, as measured by lower rates of degree completion, longer times for completion, more credits accumulated, and lower course grades. This information should be reported at the end of every academic year, beginning with the 2017-18 academic year, be shared with individual community colleges and public four-year higher education institutions, and be used to identify community college courses that are not routinely accepted for credit by the state's four-year institutions. (Chapter 3)

RECOMMENDATION 17

The Virginia Community College System should modify its policy manual to specify the types of information staff must present to the State Board for Community Colleges when the board is evaluating proposed tuition and fees increases. At a minimum, the manual should specify college-level metrics, such as tuition and fees and net price relative to income in each college's service area, and information about whether federal, state, and institutional financial aid have kept pace with increases in tuition and fees. (Chapter 4)

RECOMMENDATION 18

The system office of the Virginia Community College System should assess the adequacy of staffing in those divisions that most directly affect colleges' operations, including the divisions of academic services and research, and administrative services. The review should also determine whether duties could be more efficiently distributed between supervisors and the staff they supervise, including whether some supervisory positions could be reclassified as non-supervisory to distribute workload more efficiently. (Chapter 5)

RECOMMENDATION 19

The State Board for Community Colleges should adopt a formal policy to periodically assess the need to close or consolidate community colleges or campuses. The formal policy should specify the roles of the board, the system office, college presidents, college boards, and local governments in decisions to close or consolidate colleges or campuses. Three college-level factors should prompt an assessment: (i) high operating costs per student FTE, with increasing costs as a trend; (ii) low enrollment, with decreasing enrollment as a trend; and (iii) inability to offer core academic programs. As part of the assessment, the board should use four criteria to determine when a college or campus should be closed or consolidated: (a) access to community college programs; (b) colleges' ability to offer quality, in-demand programs; (c) the potential for net savings; and (d) the impact of closure and consolidation on the local economy. (Chapter 5)

RECOMMENDATION 20

The Virginia General Assembly may wish to amend the Code of Virginia to (i) clarify that Workforce Credentials Grant (WCG) funds be prioritized for, but not limited to, credentials for which there is a documented unmet employer demand and (ii) permit colleges to use a portion of their WCG funds to address the infrastructure or personnel challenges associated with program development or expansion if these challenges cannot be financed through other resources. (Chapter 6)

RECOMMENDATION 21

The Virginia Board of Workforce Development, in collaboration with the Virginia Community College System and the State Council of Higher Education for Virginia, should develop a methodology that can be used by community colleges to identify regional employer demands for occupations and distinguish between demand that is met by the existing workforce and demand that is not. The board should incorporate in the methodology both labor market data and qualitative feedback from employers. (Chapter 6)

1 Overview of the Virginia Community College System

SUMMARY The Virginia Community College System (VCCS) was created more than 50 years ago to improve Virginians' access to higher education and better prepare them for the workforce. The system includes 23 colleges and 40 campuses. Collectively, the 23 colleges offer hundreds of associate's degrees, certificates, and licenses designed to educate students who wish to transfer to a four-year college or university or directly enter the workforce. Community colleges also provide training programs to meet the workforce needs of businesses and industries. VCCS operates statewide but is governed centrally through the State Board for Community Colleges and the VCCS system office. VCCS received nearly \$1.7 billion in state appropriations in FY16, and spent more than 70 percent of these funds on instruction and support services for students. Enrollment in Virginia's community colleges has declined 14 percent since the economic recession ended in 2010-11 but remains higher than 10 years ago.

In 2016 the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to review the Virginia Community College System (VCCS), which had not been comprehensively reviewed by JLARC since 1991. As part of this review, JLARC was directed to evaluate the system's success in providing education, training, and credentials to succeed in the workforce; determine if the system's mission is aligned with the state's educational and workforce priorities, and the missions of secondary and four-year higher education systems through dual enrollment and transfer programs; assess the affordability of education and training opportunities; assess the spending and allocation of funds; assess the support of the system office; and compare VCCS to community college systems in other states. (See Appendix A.)

To address the study mandate, JLARC staff analyzed college-level enrollment and student completion data and college and system-level staffing and spending data; conducted surveys of staff at the system office and at the colleges; conducted site visits and interviews with faculty and staff at numerous community colleges and four-year higher education institutions; and reviewed the research literature on a variety of topics related to community colleges. (See Appendix B for a detailed description of research methods.)

VCCS was created to improve access to higher education and workforce training

The General Assembly created VCCS in 1966 to provide a more accessible and affordable means of attaining higher education than was traditionally available through four-

Review of the Virginia Community College System

(JLARC, 1991) found that VCCS had a comprehensive system of colleges that were generally accessible throughout Virginia.

The report also found that VCCS could improve its curriculum oversight and system-wide articulation agreements with other institutions. This study noted that a major challenge facing VCCS was the need to balance growth with limited resources.

year higher education institutions. VCCS attempts to be accessible and affordable through its

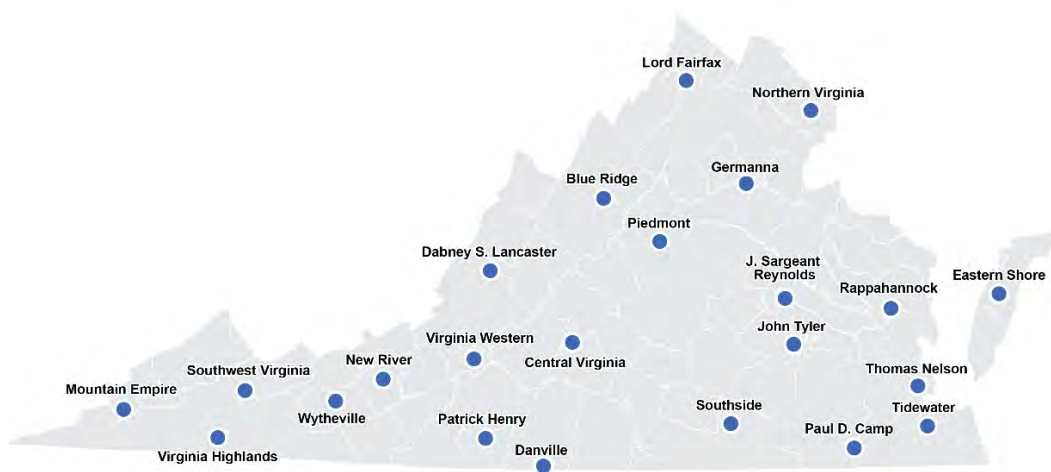
- open admissions policy—anyone over age 18, or with a high school diploma or equivalent, and able to benefit from study at a community college, can be admitted;
- many campus locations—most Virginia residents live within 30 miles of a VCCS campus; and
- lower cost of attendance—VCCS intends to keep prices under half the cost of the state’s public four-year institutions.

Through the Code of Virginia the General Assembly established several objectives for VCCS, which include offering arts and sciences instruction that can transfer to a bachelor’s degree; providing career and technical education that leads directly to employment; providing continuing education for adults; and providing training that meets the needs of the state’s businesses and industries.

VCCS plays a significant role in Virginia’s higher education system

VCCS has grown slightly since JLARC’s last VCCS study in 1991 (sidebar). In 1991, 23 colleges were in operation, and there were 34 campuses. Today there are still 23 colleges (Figure 1-1) but 40 campuses. Ten colleges have more than one campus. VCCS also has several off-campus centers and a new Shared Services Center that performs administrative functions common to all colleges, such as payroll, purchasing, and human resources.

FIGURE 1-1
VCCS includes 23 colleges located across Virginia



SOURCE: Virginia Community College System.

NOTE: Map shows main campus of each community college. VCCS has 40 campuses and 42 non-campus locations.

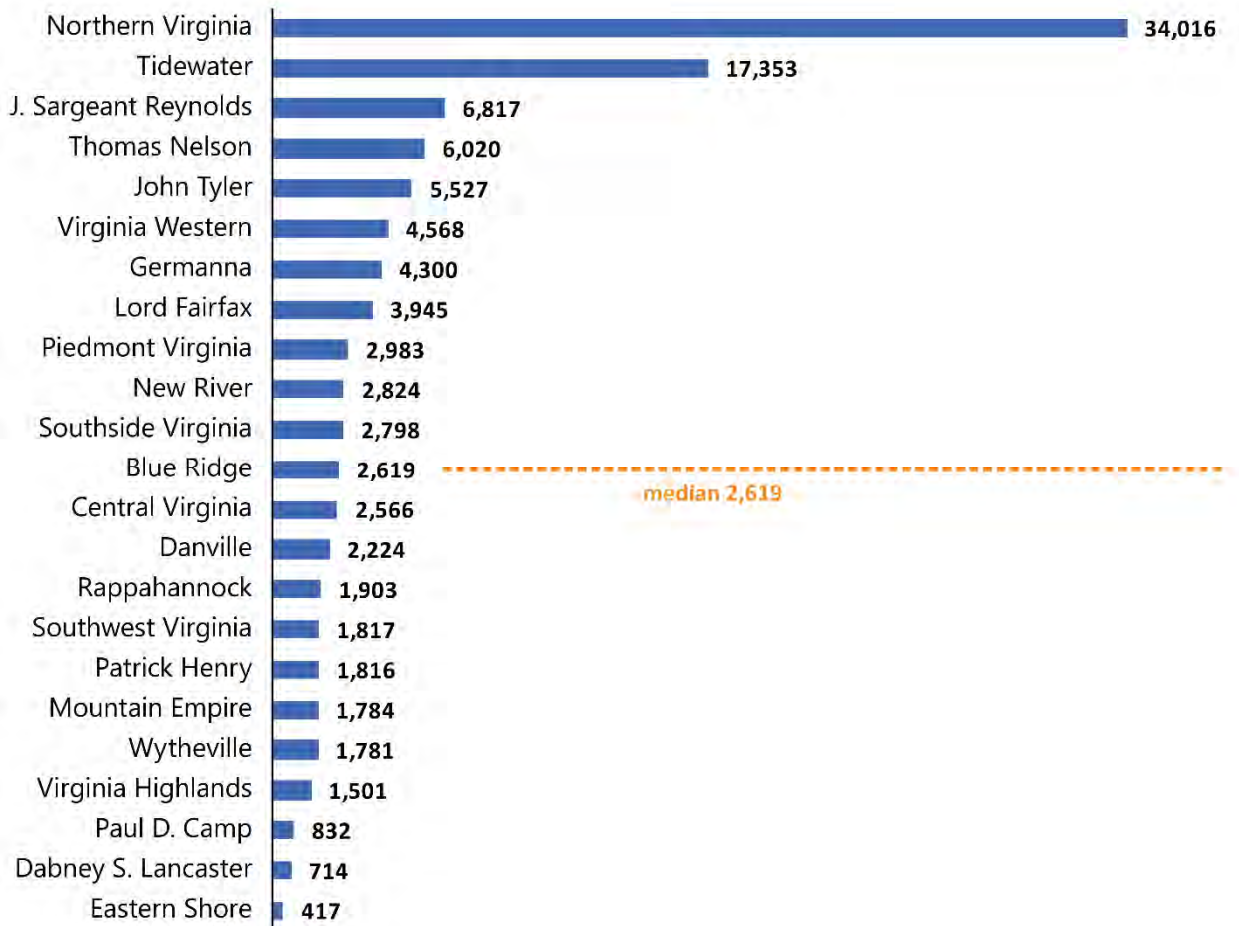
VCCS is the state’s largest institution of higher education in terms of enrollment. In the 2015-16 academic year, 250,000 individual students enrolled in at least one VCCS course, for a full-time equivalent (FTE) of 111,124 students. This accounts for 36 percent of all public higher education student FTEs in Virginia and is more than three times the enrollment in the state’s largest public four-year higher education institution, Virginia Tech.

Virginia’s 23 community colleges vary substantially in size (Figure 1-2). The largest college, Northern Virginia Community College, had more than 34,000 student FTEs enrolled at its six campuses in 2015-16. Nine colleges, primarily in southwestern and Southside Virginia, had fewer than 2,000 student FTEs. The smallest college, Eastern Shore Community College, had fewer than 500 student FTEs.

Full-time equivalent (FTE) student is a measure of enrollment that accounts for both full- and part-time students by converting total credit hours to full-time units.

One full-time student takes 30 credit hours per year; three part-time students with 10 credit hours each would equal one FTE.

FIGURE 1-2
Community college enrollments range from more than 30,000 student FTEs to fewer than 500



SOURCE: E05 Report: Annualized Student FTE and Credit Hours, SCHEV.
 NOTE: Annual FTE enrollment in 2015-16.

Community colleges offer a wide array of programs for degrees or other credentials

VCCS has for-credit and non-credit programs that are designed to either (1) provide college-level credit, courses, and degrees that can be applied to a bachelor's degree at a four-year institution or (2) train or retrain workers for success in the workforce. Within the for-credit programs, there are transfer-oriented programs and workforce-oriented programs (Table 1-1). Associate's degree programs are primarily geared toward transfer to a four-year institution, though many can be used to directly enter the workforce. Credentials from other programs, such as certificates and licenses, can transfer as well. Applied associate's degrees, certificates, diplomas, and licenses are the main workforce-oriented programs. Workforce-oriented programs generally require fewer credits and general education courses than the transfer-oriented programs, and many of these courses are non-credit. Although the bulk of VCCS credentials are workforce-oriented, the majority of community college students pursue transfer-oriented degrees.

TABLE 1-1
VCCS students can choose from hundreds of postsecondary credential programs

Credential	Description	Example	Expected completion time	Number of programs
<i>Transfer-oriented credential</i>				
Associate's degree	Designed to transfer to 4-year colleges and universities	Associate of Science in Information Technology	2-4 years	214
<i>Workforce-oriented credential</i>				
Applied associate's degree	Technical or occupational curriculum in specialized field	Associate of Applied Science in Civil Engineering Technology	2-4 years	482
Career studies certificate	Designed to enhance skills or prepare students for specialized job responsibilities	Career Studies Certificate in Electrical Wiring	Up to 1 year	230
Certificate	Designed to prepare students for specialized job responsibilities	Certificate in Forensic Science and Technology	Up to 2 years	
Diploma	Designed to emphasize a career or technical area	Diploma in Precision Metal Working	Up to 2 years	25
License	Issued by state professional boards rather than by VCCS	Licensed Practical Nurse	Varies	

SOURCE: JLARC analysis of 2015-16 Integrated Postsecondary Education Data System (IPEDS) data; VCCS policy manual; 2013 VCCS Credit Audit Report.

NOTE: Data not available on number of programs in the "License" category.

Three key legislative efforts are designed to maximize benefits of community college

VCCS is responsible for implementing three key legislative efforts designed to provide Virginians with a more accessible and affordable means of attaining a higher education credential or to improve their employment prospects through workforce training. First, the state's transfer program is intended to allow students to transfer to a four-year institution through the guaranteed admission agreements that VCCS has developed with all of the state's public four-year institutions. By taking community college courses that count toward a bachelor's degree, students can theoretically reduce the cost of obtaining a four-year degree. In the 2014-15 academic year, more than 11,600 students transferred from VCCS to one of Virginia's public four-year institutions, up 35 percent from the 2007-08 academic year. As part of the state's transfer effort, community colleges and four-year institutions have begun developing dual admissions agreements, which provide for simultaneous admission to a community college and four-year institution.

Second, the dual enrollment program allows students to accumulate college credit while in high school, theoretically reducing the amount of time it takes to attain a two- or four-year degree. The state's dual enrollment program is administered by VCCS. Dual enrollment programs are in place at all 23 community colleges. In Fall 2016, more than 33,700 high school students were enrolled in a dual enrollment course through VCCS. The majority of these courses are taught in high school classrooms by high school instructors.

Third, workforce training is increasingly prominent since the General Assembly expanded VCCS's focus on workforce-oriented programs. In 2008, VCCS replaced the Virginia Employment Commission as the administrator of the federal Workforce Investment Act (now the Workforce Innovation and Opportunity Act). In addition, in 2016 the General Assembly appropriated \$12.5 million in funding and financial aid for the 2016-18 biennium for non-credit workforce training programs, which have historically been funded through tuition and fees paid by students and employers. Moreover, all VCCS colleges have implemented their own initiatives to respond to their communities' workforce needs.

VCCS operates statewide but is governed centrally

The governance and administration of VCCS is multilayered, but the system is relatively centralized compared to Virginia's public four-year institutions. While each college has its own president and operates with some degree of autonomy, colleges must operate within policies set by the State Board for Community Colleges and VCCS system office. The state board sets tuition and fees, approves programs and offerings, confers degrees, and appoints the chancellor, who leads the system office. The VCCS chancellor serves as the chief executive officer of the system and secretary to the state board.

Each community college is led by its own president and local community college board and has some autonomy in spending and academic offerings. Colleges can develop academic and workforce programs, discontinue courses and certificates, and make spending decisions. The local community college board reviews new curricula and program offerings, recommends program offerings for state board approval, recommends plans for the design and construction of facilities for state board approval, reviews and approves the college budget, and works with the chancellor and others to choose the college president.

The VCCS system office coordinates the administration of board policies and provides support to the 23 colleges. The system office is organized into eight divisions. Three divisions carry out the office's primary operations:

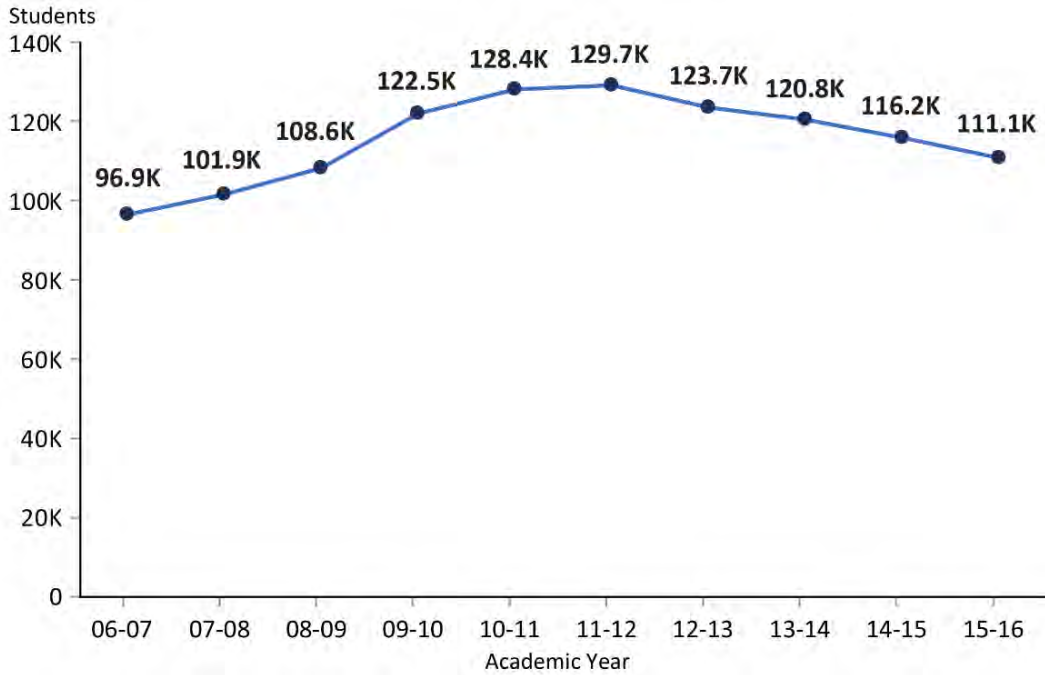
- **Administrative services** provides coordinated policy development and expertise to colleges in areas such as budget and financial management, human resources, procurement, and facilities.
- **Academic services and research** is responsible for academic and student services policy oversight as well as coordinating approval for degree, diploma, and certificate programs, and monitoring progress on the overall strategic plan and college student success plans.
- **Workforce development** administers Title 1 of the federal Workforce Innovation and Opportunity Act (WIOA) program and supports the colleges in their education and workforce training efforts.

The remaining five divisions support internal operations for the system: system counsel, internal audit, information technology, institutional advancement, and the chancellor's office.

VCCS enrollment has declined substantially in recent years

Total enrollment in 2015-16 was 15 percent higher than a decade before but has declined 14 percent since peaking in 2011-12 (Figure 1-3). Recent enrollment declines are consistent with national trends and appear to reflect the demographic characteristics of community college students and changes in the economy. VCCS students are older and more likely to attend college part-time, often because they are already employed or have families. During a weak economy, these individuals may be more motivated to enroll in community college than they would be during times of economic prosperity. This could partially explain why VCCS enrollment increased during the last recession beginning in 2007-08 but declined substantially since the recession ended in 2010-11. The State Council of Higher Education for Virginia (SCHEV) estimated in its 2014-15 enrollment projection that VCCS student enrollment (FTE) system-wide will increase three percent by 2021-22.

FIGURE 1-3
Total VCCS enrollment (FTE) has declined in recent years



SOURCE: E05 Report: Annualized Student FTE and Credit Hours, SCHEV.

Most VCCS funding comes from federal grants and tuition

VCCS received the sixth-largest total state appropriation (\$1.68 billion) in FY16. Between FY07 and FY16, total appropriations to VCCS increased 70 percent, adjusted for inflation. VCCS receives both general and non-general funds, with non-general funds accounting for more than three-fourths of total VCCS revenue (Table 1-2). The largest source of non-general fund revenue is federal funding, which totaled nearly \$600 million in FY16. Tuition and fees charged by the colleges totaled nearly \$550 million, and accounted for nearly one-third of total revenue.

The General Assembly appropriates general funds directly to the VCCS system office, and the VCCS system office allocates most of these general funds to colleges. A portion, however, is retained by the system office to support its operations. In FY16, \$28.6 million was retained by the system office for its own operations.

TABLE 1-2
Non-general funds comprise the majority of total VCCS revenue

Revenue source	FY16 appropriation (\$ M)	Percentage
General funds	405.7	24.2
Non-general funds		
Federal ^a	598.8	47.1
Tuition and fees	546.1	43.0
Auxiliary enterprises	44.7	3.5
Foundation / other grants / contracts	25.5	2.0
Workforce development	24.6	1.9
Debt service	16.1	1.3
Other ^b	15.2	1.2
Non-general funds	1,270.8	75.8
Total	1,676.6	100%

SOURCE: JLARC analysis of Virginia Department of Planning and Budget data.

NOTE: Local revenue in FY16 totaled \$2.38 million.

^a Some federal funds can be used only for specific purposes such as student aid.

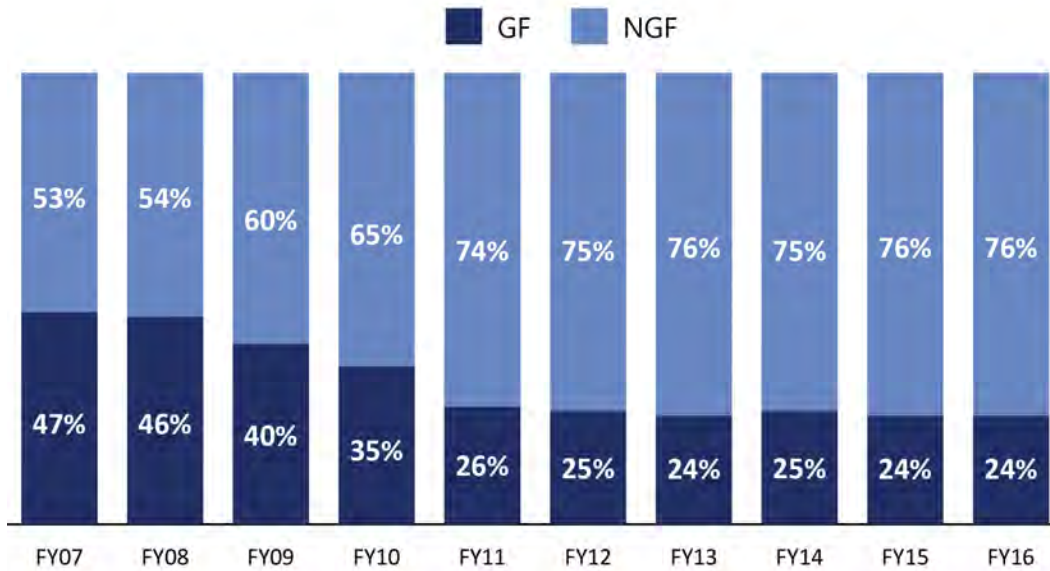
^b Includes indirect cost recovery, insurance recovery, student financial assistance, and work study.

VCCS has grown increasingly reliant on tuition and fees

General fund appropriations per student were 23 percent lower in 2015-16 (\$3,651)—adjusted for inflation—than they were 10 years before (\$4,736), and VCCS has grown increasingly reliant on non-general funds, including revenues generated by tuition and fees to carry out its operations. Compared to non-general funds, the general funds appropriated to the system have decreased over the past 10 years as a proportion of VCCS funding (Figure 1-4). General funds have not made up the majority of the system's resources since 2003.

As enrollment continues to decline, revenues will also decline unless tuition and fees or general fund appropriations increase. In Virginia, state funding for higher education is based on the cost of performing certain functions, such as instruction, student support services, and building operations. The estimated cost of these functions is based on enrollment, so lower enrollment can result in lower total funding. As enrollment and general fund appropriations have declined, VCCS has been able to accommodate these declines exclusively through increases to tuition and fees. However, some stakeholders have expressed concern that VCCS's affordability is being eroded as tuition and fees increase.

FIGURE 1-4
General funds have declined as a proportion of VCCS revenues over past decade



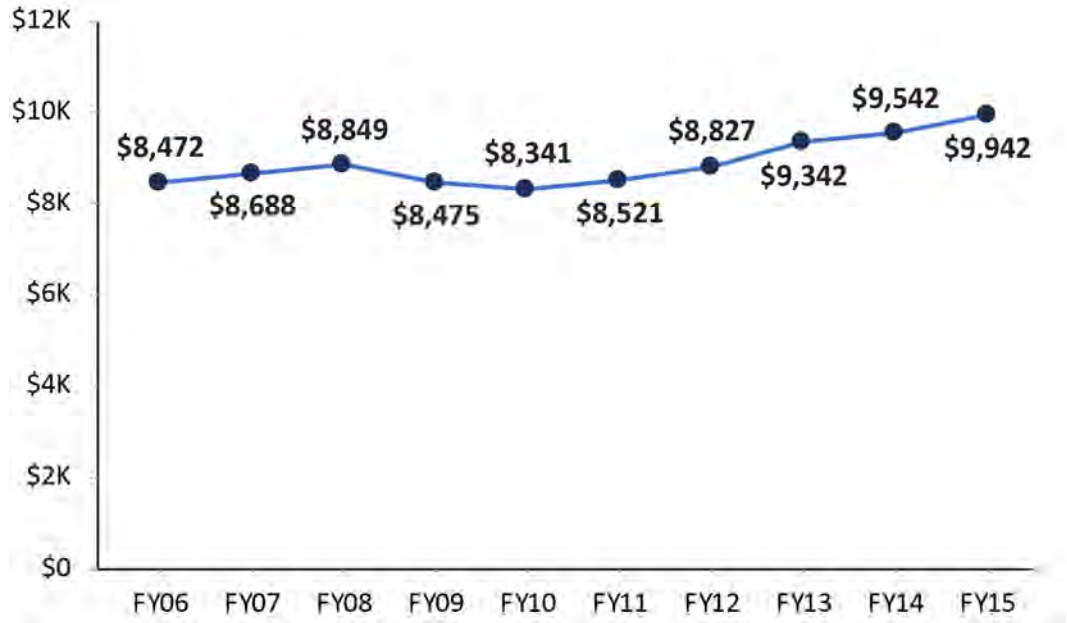
SOURCE: JLARC analysis of Virginia Department of Planning and Budget data.

Majority of VCCS funds are spent on functions designed to support student success

Over the past 10 years, total VCCS spending per student FTE has increased (Figure 1-5). In FY15, VCCS spent 72 percent of its funds on functions designed to directly support student success: instruction, academic support, and student services (Figure 1-6). The remaining 28 percent of funds were used for functions that benefit students only indirectly: institutional support, building operations and maintenance, public service activities, and auxiliary enterprises. Forty-three percent of expenditures were for instruction alone. The proportion of funds spent on functions designed to directly support student success was the same in FY07 as it was in FY15.

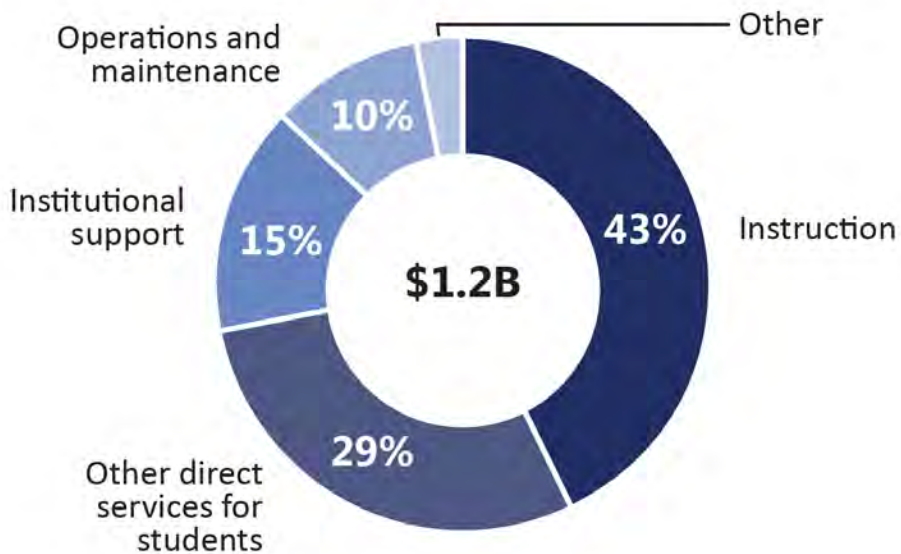
The majority of VCCS’s operating expenses are for employee compensation and benefits. Nearly half of these employees are instructional staff at the colleges, most of whom are part-time adjunct faculty. Since FY1990, the number of VCCS staff positions specified in the Appropriation Act has increased from 6,223 to 11,337, and about half of that increase occurred over the past decade. The ratio of staff to student FTEs has declined slightly, however.

FIGURE 1-5
VCCS spending per student FTE has increased in recent years



SOURCE: JLARC analysis of IPEDS data; E05 Report: Annualized Student FTE and Credit Hours, SCHEV.
 NOTE: Adjusted for inflation.

FIGURE 1-6
More than 70 percent of total VCCS spending was for instruction and other student support services (FY15)



SOURCE: JLARC analysis of 2014-15 IPEDS data.
 NOTE: "Other direct services for students" includes academic support, student services, and scholarships or grants. "Other" includes auxiliary expenses, interest earned, and public service expenses. Appropriation data is current as of FY16 (\$1.7B); spending data is current as of FY15 (\$1.2B).

2 Supporting Student Success in Virginia's Community Colleges

SUMMARY At Virginia's community colleges, the rates of student success—attainment of a credential or transfer to four-year institution—are low, as are the rates at community colleges nationwide. The low rates reflect, at least in part, the characteristics and personal circumstances of the community college student population, which is older, lower in socioeconomic status, and more likely to be enrolled part-time than the student population of four-year institutions. VCCS has implemented several initiatives in recent years that have the potential to improve student success levels. To build on these initiatives, VCCS should develop criteria for identifying students who are at risk for non-completion and could benefit from more regular, comprehensive support services, and colleges should prioritize services and other interventions for this population. Community colleges generally lack a sufficient number of staff to meet the advising needs of students. VCCS should develop a proposal for increasing the number of advisers to allow colleges to provide advising that is more proactive and even mandatory, as necessary for students at risk of non-completion. To better prepare at-risk students for college-level course work, VCCS should (1) require at-risk students to attend orientation and complete a one-credit student development course in their first semester and (2) coordinate with the Virginia Department of Education to identify underprepared students while still in high school.

The success of Virginia's community colleges in meeting the educational and training needs of businesses and individuals is critical to the state's economy. It is estimated that by 2020, 68 percent of all jobs in Virginia will require some postsecondary education. The state's community colleges play an important role in preparing individuals for these jobs, but this role depends on their ability to support students' success in their academic and career pursuits. A substantial amount of state, federal, and personal resources are invested in community college programs for students, and supporting student success helps ensure a positive return on these investments. Success can be measured by students' rate of progress toward their intended community college credential and whether they ultimately attain a credential or transfer to a four-year higher education institution.

Unless specified, **community college credentials** include short- and long-term certificates, including licenses and diplomas, as well as associate's degrees and bachelor's degrees from public four-year institutions in Virginia.

In Virginia and nationwide, the rate of credential attainment by community college students is low

The rate of credential attainment among Virginia's community college students, in Virginia and across the U.S., is less than half. A majority of the students who do earn a credential substantially exceed the standard completion time. Low rates of credential

JLARC's cohort analysis of VCCS data offers insight on student success.

The cohort comprised 52,216 students who were (1) age 17 to 19 and entering community college for the first time in 2008-09, 2009-10, or 2010-11; (2) seeking a credential; and (3) earning at least 12 credits during their first year. Students who did not intend to earn a credential were excluded from the analysis. The cohort did not include students enrolled in non-credit programs such as the Workforce Credentials Grant Program.

(See Appendix B for research methods.)

attainment are cause for concern; students can incur substantial costs paying for community college courses, and the state expends general funds to provide courses. Improving student success can minimize the cost to students and the state for course work that does not lead to a credential. It can also better support economic growth and prosperity in Virginia by improving students' employment and earnings prospects.

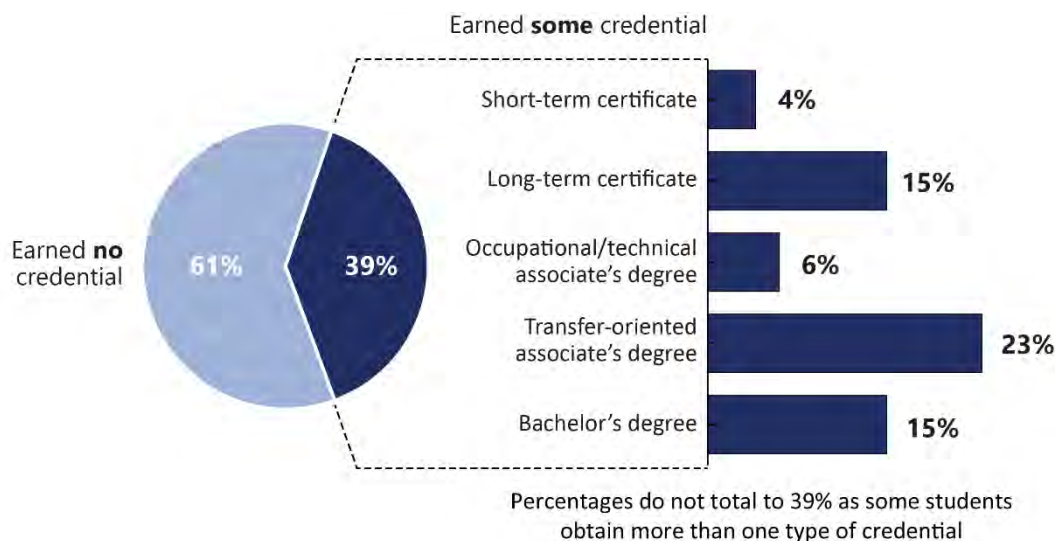
About 40 percent of community college students earn a credential, comparable to rates in other states

According to JLARC's cohort analysis of VCCS data (sidebar), just 39 percent of community college students earned a community college credential or college bachelor's degree within seven years of their initial enrollment in community college (Figure 2-1). Rates of credential attainment varied widely across Virginia's 23 community colleges (Figure 2-2 and Appendix C). Just 15 percent of the overall cohort transferred to a four-year institution and earned a bachelor's degree within seven years. The rate at which cohort students earned a bachelor's degree varied from a high of 19 percent who started at Northern Virginia Community College to a low of four percent who started at Mountain Empire Community College. Community college completion rates are substantially lower than rates for public four-year institutions in Virginia but comparable to community college rates across the U.S. and in the Southeast. Nationwide, approximately 39 percent of community college students earned a credential or degree within six years, though in five states the rate exceeded 50 percent.

Data used in the cohort analysis was from students who attended community college before student success initiatives were implemented.

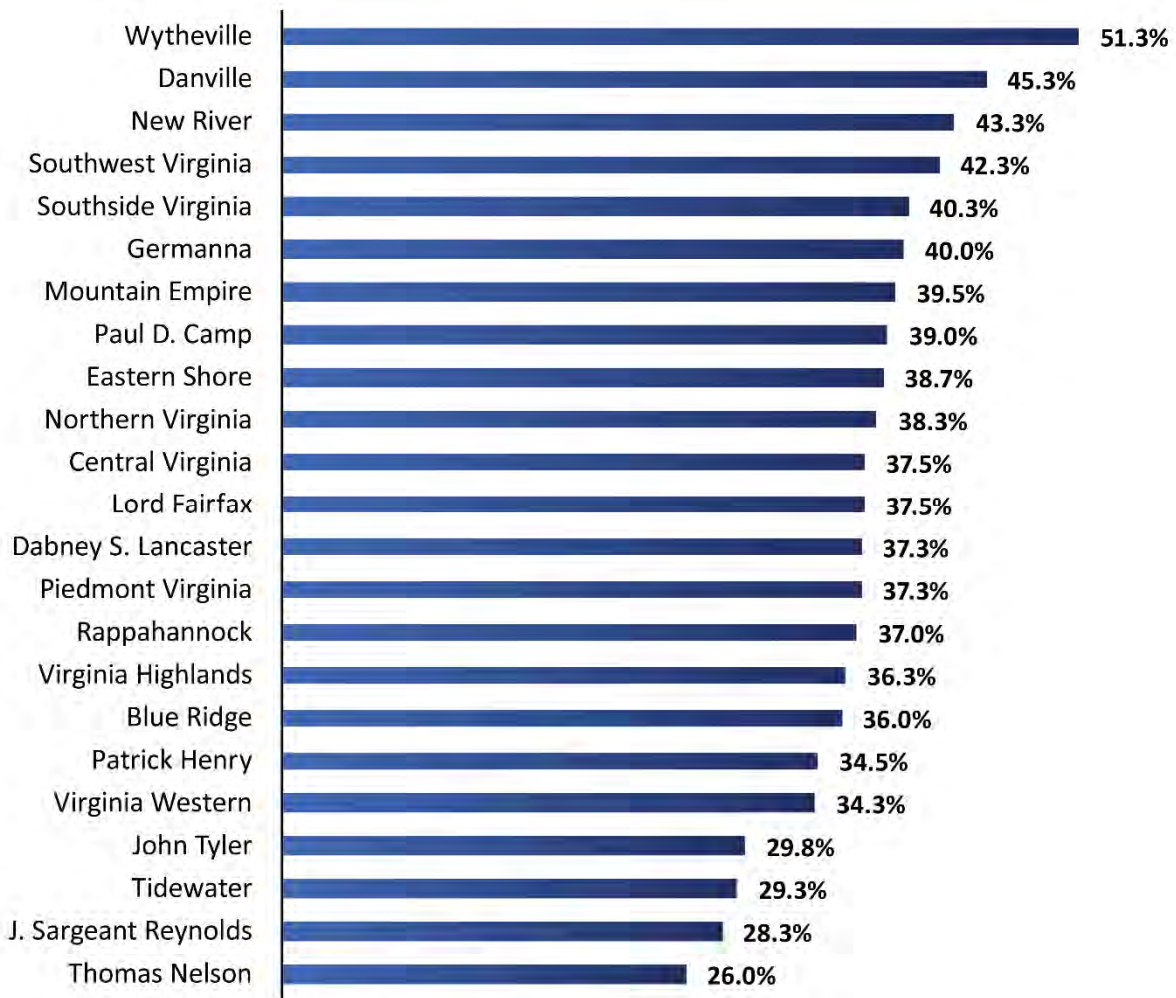
Student success rates may be higher for a cohort of students who attended community college after these initiatives began.

FIGURE 2-1
Majority of community college students did not earn a community college credential or bachelor's degree



SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.
NOTE: Includes students who transferred to four-year institutions and obtained a bachelor's degree. Students in the JLARC cohort analysis left college before several VCCS student success initiatives were implemented. Student success rates may be higher for a cohort entering community college after these initiatives were begun.

FIGURE 2-2
Rates of earning a community college credential or bachelor's degree varied widely among colleges



SOURCE: JLARC cohort analysis of SCHEV data.

NOTE: Includes students who transferred to four-year institutions and obtained a bachelor's degree. Students in the JLARC cohort analysis left college before several VCCS student success initiatives were implemented. Student success rates may be higher for a cohort entering community college after these initiatives were begun.

A substantial number of community college students leave community college before completing a degree or credential, often within their first year. About 18 percent of students in the cohort left community college by the end of their first year. The percentages of students leaving community college by the end of their first year have declined about one to two points in more recent years. The percentage of students leaving by the end of their first year is much higher than at four-year institutions in Virginia but comparable to rates at community colleges nationwide. For example, a little more than 20 percent of community college students nationwide typically leave college by the end of their first year.

State and students incur costs for credits that do not lead to a credential

Most community college courses are **three-credit courses**.

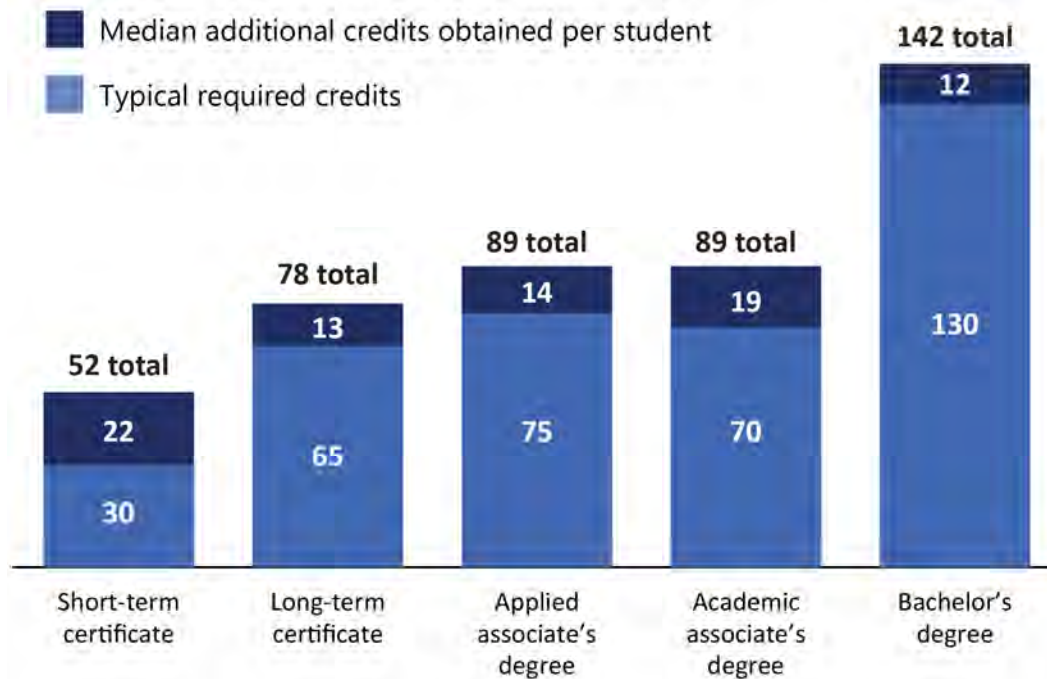
There is a cost—to both the student and the state—when a student enrolls in community college but does not attain a credential. The median number of credits earned by these students was 42—the equivalent of nearly a year and a half full-time at a community college. In FY16, a single community college credit cost a student \$142.50 in tuition and fees, and cost the state \$106.85 in general fund appropriations. At these rates, those 42 credits would cost a student approximately \$5,985, either out-of-pocket or through state, federal, or institutional financial aid. The cost in state general fund appropriations would be about \$4,490, bringing the total investment to approximately \$10,470 for an individual student. The total investment is higher for the 50 percent of students in the cohort who earned more than 42 credits without attaining a credential.

For some students, completing community college course work without earning a credential may still lead to measurable gains in income, according to national research. In a few specific areas of training or specialization, completion is less important than the attainment of skills and experience. Some students increase their prospects for employment without completing a credential and leave school early for employment in their area of training. This may be more likely to occur in programs in the technology and skilled labor fields. For example, community college staff in the Tidewater region reported that students in welding programs are often hired in shipyards and other industries before they can finish their welding credentials.

Most community college students accumulate more than minimum number of credits needed to earn a credential

The vast majority of community college students accumulated more credits than the typical number required for a credential. According to JLARC's cohort analysis, across the five types of credentials available through VCCS, 75 percent of students accumulated more than the typical number of credits needed to earn a credential. The median number of these excess credits varied from a high of 22 for short-term certificates to 12 credits for bachelor's degrees (Figure 2-3). One-fourth of the students earning bachelor's degrees accumulated 21 or more credits beyond the typical number required. (See Chapter 3 for information about students earning transfer-oriented associate's degrees and bachelor's degrees.)

FIGURE 2-3
Students accumulated more than the typical number of credits needed to earn each type of credential



SOURCE: JLARC cohort analysis of SCHEV data.

NOTE: Typical number of credits for each type of credential is defined as the 25th percentile of credits earned. Actual minimums vary among community colleges and programs. Total credits accumulated include credits from remedial courses.

Certain factors are associated with lower rates of completion and transfer

Certain factors appear to be associated with lower credential attainment rates and, compared to the state's four-year institutions, the community college system is made up of more students who exhibit these factors. This is largely due to VCCS's open admissions policy. This policy is key to VCCS's ability to expand access to higher education, particularly for individuals who would have difficulty being admitted to a four-year college or university. Compared to students at Virginia's public four-year colleges and universities, community college students are more likely to be older, enrolled part-time, and from low-income households. According to the research literature, these factors—individually and in combination—are associated with negative student outcomes in higher education.

Several student populations are at risk of not completing a credential or transferring

JLARC staff interviewed community college staff at 12 VCCS colleges. JLARC staff visited nine of the 12 community colleges. Executive level staff with the colleges were asked about various topics, including the challenges students face, student support services provided by the colleges, and college efforts to improve student success levels.

(See Appendix B for research methods.)

Older students attending community college part-time face particular challenges. Fifteen percent of first-time VCCS students in Fall 2016 were over the age of 21, compared to less than one percent at public four-year institutions in Virginia. Older students earn credentials at lower rates than younger students. For example, in the cohort analyzed by JLARC staff, credential attainment rates ranged from about 24 to 27 percent for students entering community college in their 20s—well below the rate of 39 percent for students under age 20. According to research literature, older students are less likely to have good study habits and, having been away from school for years, they may no longer be accustomed to the demands of schoolwork. Older students may also be more likely to have job and family responsibilities that compete with the demands of education and require them to attend community college part-time.

Part-time students are less likely than full-time students to earn a credential or transfer to a four-year institution. Part-time students comprised 38 percent of first-time VCCS students but just one percent of students at public four-year institutions in Fall 2016. Just 28 percent of community college students who were part-time in their first year earned a credential within seven years, compared to 40 percent who were full-time. In interviews, community college staff noted the challenges faced by part-time students.

Rates of completion and credential attainment are somewhat lower among first-generation college students (defined here as students whose parents did not attend college). About 37 percent of community college students in the cohort were first-generation college students, and approximately one-third of these students earned a credential (compared to 39 percent of students who were not first-generation). First-generation college students may not have family members who can readily act as a resource for how to successfully navigate the higher education system and complete degrees or credentials.

Rates of credential attainment are also lower for lower-income and African American community college students. Students who received federal Pell Grants, which are available only to low-income students, had credential attainment rates about nine percentage points lower than students who did not receive Pell Grants (33.3 vs. 42.6 percent). Just 24 percent of African American students earned a credential within seven years, compared to 53 percent of Asian students and 40 percent of white or Hispanic students.

Students who need remedial education to prepare them for college-level course work are also less likely to attain a credential. Just one-third of students who were required to enroll in remedial courses earned a credential within seven years. By contrast, of the students who were not required to complete remedial courses, about 49 percent earned a credential within seven years.

VCCS should prioritize student support services to students at risk of not completing

It is critical that community colleges identify on an ongoing basis the students who are at risk for non-completion and could benefit from more regular, comprehensive support services. Support services and other interventions could then be prioritized toward this student population. However, there is no system-wide definition of an “at-risk” student, and colleges differ in the extent to which they proactively identify these students. Many colleges rely only on reactive measures, such as the SAILS early alert system (sidebar), to identify students who may need more intensive and sustained support services. The VCCS system office should facilitate this effort by developing standard criteria for colleges to identify these students. The criteria could include some or all of the following characteristics:

- older or returning to formal education,
- enrolled part-time,
- the first in their family to attend college,
- lower income,
- a racial or ethnic minority, or
- required to complete remedial course work.

The colleges should then use the criteria to identify students in each incoming cohort who are at risk for non-completion and could benefit from more regular, comprehensive support services. In developing standard criteria, VCCS may need to focus on students who have multiple characteristics associated with non-completion. The number of newly enrolled students system-wide who met one of the characteristics listed above ranged from 2,700 to 13,000 students in Fall 2016.

RECOMMENDATION 1

The Virginia Community College System should develop criteria and guidelines that colleges can use to identify students who are at risk for not completing a degree or credential and could benefit from more regular, comprehensive support services.

Identifying college preparedness gaps in high school could improve student success

Because a key purpose of Virginia's community colleges is to maintain open access to higher education, VCCS's policy is to admit applicants who have a high school diploma or GED, even if they are unprepared for college-level work. Community colleges then address the lack of preparedness through remedial courses in math or English. VCCS requires most new students to take the Virginia Placement Test, and uses test scores to identify students who are unprepared for college-level course work. Students pay for remedial courses, directly or through financial aid, but the courses do not count toward a credential.

Student Assistance and Intervention for Learning Success (SAILS) is a software system used by VCCS to identify and engage students at risk of failing a course or not completing their program. Faculty can raise “flags” for students with poor attendance, low test scores, or other risk factors. Academic advisers or other college staff then follow up with students to address their needs.

A majority of students in JLARC's cohort analysis took at least one remedial course at some point during their community college tenure. Rates of credential attainment among VCCS students who need academic remediation are comparable to rates nationwide. About 63 percent of cohort students enrolled in a remedial math or English course before enrolling in college-level courses. These students attempted an average of about 12 remedial credits and earned about nine. For students who require remedial education, these courses add time and cost to the process of earning a credential. The 12 remedial credits attempted by the average community college student represent approximately \$1,710 in tuition and fees paid by students, either out-of-pocket or through aid, and an additional \$1,280 in general fund appropriations.

California and Washington use standardized testing to assess the college readiness of high school students. Students who are not deemed "college-ready" have opportunities to take courses in their senior year to prepare for college-level work.

To reduce the need for remedial education in community college, the state should identify shortcomings in college preparedness before students graduate from high school. Greater coordination between VCCS and K-12 school divisions is needed to support a more effective transition from high school to community college. To strengthen student preparedness for college-level work, at least two other states (sidebar) and one VCCS college have begun to administer placement tests or other standardized tests to students before they leave high school. Studies of California's program found that it reduced the need for postsecondary remediation for four-year and community college students.

The Virginia Placement Test or comparable assessment could be administered, through K-12 school divisions, to students who express interest in attending community college after graduation. This would allow schools and students to assess whether individual students are prepared for college-level work, and address deficiencies before students graduate from high school. There may be costs to VCCS and school divisions of administering such an assessment to high school students, and testing would require coordination and planning by VCCS and the Virginia Department of Education (VDOE). VCCS and VDOE should collaborate to determine how an assessment could be administered to high school students, including during which grade and for which students. VCCS and VDOE should also determine whether additional resources would be needed to administer the test.

RECOMMENDATION 2

The Virginia Community College System and the Virginia Department of Education should develop a proposal for administering the Virginia Placement Test or comparable assessment to high school students. The proposal should include (i) how the test could be administered, in which grades and to which students; (ii) an estimate of the cost of administering the test; and (iii) actions to be taken to improve the college readiness of students whose assessment results exhibit the need for remediation. The proposal should be submitted to the House Education and Appropriations committees and Senate Education and Health, and Finance committees no later than September 1, 2018.

VCCS has undertaken a restructuring of the remedial course curriculum in recent years, and this initiative has the potential to reduce the cost and time required to complete remedial course work. Remedial English courses have been standardized across the system, and remedial math courses have been adapted for different study pathways, in order to reduce the number of topics students need to cover. VCCS is also analyzing student performance data to more accurately identify students who require remediation to reduce the number of students placed in remedial courses. These changes to remedial education are being implemented system-wide.

Many community college students are not receiving the academic support services they need

The low rate and pace at which community college students in Virginia earn credentials suggests that most students need some degree of ongoing assistance during their college tenure. The need for ongoing assistance may be significant for students facing personal and academic challenges. Students who are at risk for non-completion may need more intensive and sustained assistance through support services such as academic advising and tutoring.

Advising is necessary but mostly optional, and staffing resources are not sufficient to meet student needs

There is an emerging consensus in the research literature and among community college staff that to improve student outcomes, community colleges must provide more intensive—and in some cases, mandatory—academic advising services for students at risk for not completing a credential. At-risk students are often the least likely to use these services and the most likely to need them. Academic advising can help ensure that students make steady academic progress and complete the courses needed to earn a credential. The primary benefit of more intensive or mandatory academic advising is that it can better ensure students are directed to the support services they need to continue progressing toward a credential.

Academic advising refers to the advising of students who are in pursuit of credentials, including transfer-oriented associate's degrees and other types of credentials.

Academic advising is available and sometimes mandatory, but many students who need guidance do not seek it

Academic advising is critical to the success of most community college students. According to the research literature, students who use academic advising are more engaged and more likely to complete a credential. One study found that students who meet with their academic adviser at least twice during the academic year tend to engage more frequently in a range of educational activities. Another study found that academic advising improved retention and graduation rates, particularly when advisers focused on the needs of undecided students, those who decide to change their major, and first-generation students who may not know how to navigate the higher education system.

Proactive advising is different from the traditional advising model, which tends to be relatively passive.

The proactive adviser initiates frequent contact with students, particularly those who are at risk for not earning a credential. The adviser attempts to address academic problems by directing students to additional support services such as tutoring.

JLARC staff surveyed executive-level staff at all 23 community colleges in Virginia. **Academic vice presidents** from 21 colleges responded, a response rate of 91 percent.

The survey included questions about topics such as academic advising, tutoring, remedial courses.

One approach to supporting student success is to make sure that students—particularly those at risk for non-completion—have regular meetings with an academic adviser. Historically, community colleges have made academic advising services largely optional for students and relied on a limited number of professional advising staff to provide advising services. However, according to the research literature, “proactive” advising is considered a best practice that can improve retention and credential attainment rates for at-risk students (sidebar).

Nearly all community colleges require at least some students to meet with an academic adviser under certain circumstances. However, at a majority of colleges, students are not required to meet with an adviser when guidance might be most useful, such as when students choose their classes or declare a major, when placement tests identify a need for remedial education, or when poor academic performance is flagged by the college’s early alert system.

The majority of colleges conduct outreach to at-risk students and make advising accessible by offering services online, by email or phone, or in groups. Still, many students do not seek guidance even when they need it. Only eight academic vice presidents reported that students who need guidance to succeed actually avail themselves of academic advising services. Staff at one college noted that many students “prefer to self-advise” rather than talk to an adviser.

Because proactive advising services can improve student outcomes, VCCS should require certain students to take part in them. This requirement should apply to students who are at risk for non-completion and could benefit from more regular, comprehensive support services. VCCS should develop criteria and guidelines colleges can use to identify students who are most likely to benefit from mandatory proactive advising. As described earlier in this chapter, VCCS could identify these students using factors associated with lower completion and transfer rates, such as age, part-time enrollment, or enrollment in remedial courses. Because JLARC’s cohort analysis determined that first-year GPA is a strong predictor of completion, this criterion could be used to determine whether a student should continue to receive mandatory proactive advising after their first year.

RECOMMENDATION 3

The Virginia Community College System should develop a system-wide policy to ensure that at-risk community college students receive proactive, individualized advising services at the most appropriate times. This policy should specify (i) the characteristics of students who should be required to meet with an academic adviser; (ii) the events or circumstances that trigger mandatory adviser meetings; and (iii) the adviser’s role in subsequently monitoring student performance and intervening when appropriate.

Advising caseloads are too high to meet student advising needs

Virginia's community colleges do not currently have sufficient advising staff to ensure that students—particularly those who are at risk for non-completion—receive regular one-on-one advising. Community college staff repeatedly emphasized that they lack a sufficient number of academic advisers to meet student needs. Increasing the number of academic advisers or college success coaches was the most commonly identified approach to improve student success across VCCS, selected from 14 approaches by 28 presidents and academic vice presidents representing 20 colleges. Only eight colleges indicated that they have the capacity to provide a sufficient quality of academic advising services to most of the students who need them. Twenty-one colleges indicated that providing academic advising services is difficult because of an insufficient number of professional advisers, large caseloads, or other job responsibilities. In interviews, staff at nearly all of the nine community colleges visited reported a need for more academic advising staff.

Community colleges generally have some non-faculty advisers, but most academic advising is provided by full-time faculty. However, compared to full-time faculty advisers, non-faculty advisers generally have more time for advising students because often their sole responsibility is academic advising. While faculty are typically responsible for advising a smaller number of students than non-faculty advisers, their advisory role is secondary to instruction. As a result, many faculty may not have the time to fully advise all students who would benefit from these services. In interviews (sidebar), faculty at one community college said they had time to routinely advise only a fraction of the students assigned to them. Moreover, a student may not have a faculty adviser right away because students are not usually assigned a faculty adviser until they declare a major.

At the colleges responding to the JLARC survey of academic vice presidents (sidebar), the median ratio of students to faculty advisers was 55. The median number of students per non-faculty adviser FTE was 250 students, and more than 500 for three colleges. While the median ratio in Virginia is lower than the nationwide median of 440 for community colleges, neither ratio allows advisers to regularly interact with more than a fraction of students.

State could increase number of academic coaches and provide “proactive” and mandatory advising for more at-risk students

Community colleges are aware that brief and infrequent advising is not sufficient for many students, and that “proactive” mandatory advising can improve retention and credential attainment rates. Virginia's community colleges need to be more strategic and purposeful about identifying at-risk students and ensuring they have many points of contact with academic support. The colleges have some strategies to provide advising services, but they have insufficient staff to provide proactive and mandatory advising. The state could increase the capacity of community colleges to provide these advising services by providing funding to increase the number of non-faculty advisers

“*There's not a lot of time to meet with students and grow them into a success plan because you're always shuffling them in and out.*”

— Community college staff

JLARC staff conducted **focus groups with faculty** at one community college. Faculty were asked about the challenges facing community college students, the role of faculty in providing students support services such as academic advising, and strategies for improving student outcomes in community colleges.

(See Appendix B for research methods.)

In a separate **survey of academic vice presidents**, JLARC staff asked for the numbers of faculty and non-faculty advisers and student caseloads to better understand colleges' capacity to provide academic advising.

(See Appendix B for research methods.)

across the system. VCCS should develop a proposal for how the number of non-faculty advisers could be increased.

RECOMMENDATION 4

The Virginia Community College System should develop a proposal for improving the capacity of community colleges to provide proactive, individualized, mandatory advising services to students who are at risk for not completing a degree or credential and could benefit from more regular, comprehensive advising services. The proposal should be submitted to the House Education and Appropriations committees and Senate Education and Health, and Finance committees no later than September 1, 2018.

One way VCCS could improve the capacity of community colleges to provide proactive, individualized, mandatory academic advising for at-risk students is through the College Success Coach Initiative. This initiative uses the proactive advising model and is currently limited to nine colleges with total enrollments below 2,500 FTE students. Each college receives annual funding from the VCCS system office for one part-time project coordinator and two full-time success coaches who provide intensive advising services to at-risk students. Participation in the program is voluntary for students, and coaches identify up to 200 students who meet certain eligibility criteria and want to receive more proactive advising services. This caseload of 100 students per coach is substantially smaller than the median of 250 students per adviser reported by community colleges in response to the JLARC survey.

To provide proactive, mandatory academic advising through the College Success Coach Initiative, VCCS would need to modify and expand the program. VCCS would need to change the eligibility criteria to match the criteria and guidelines it develops to identify students who are at risk for non-completion and could benefit from more regular, comprehensive services (Recommendation 1). Participation in the program would need to be mandatory for these students. The program would also need to be expanded to all 23 community colleges. This could be done at its current scale, serving 200 students per college. In FY17, the nine participating colleges received a total of \$1.2 million in funding, or approximately \$130,000 per college. At the current scale of 200 students per college, the cost to expand the program to the remaining 14 colleges would be approximately \$1.8 million. The additional cost to serve 400 students per college at all 23 colleges would be \$4.9 million, and the additional cost to serve 600 students per college would be \$7.9 million.

Alternatively, VCCS could improve the capacity of community colleges to provide proactive, mandatory advising by increasing the number of non-faculty advisers system-wide. This would likely require a similar investment by the state. In developing a proposal for improving the advising capacity of colleges, VCCS should compare the advantages, disadvantages, and costs of (1) expanding the College Success Coach Initiative to the 14 community colleges that do not currently participate and (2) increasing the number of non-faculty academic advisers system-wide.

VCCS relies primarily on part-time faculty for classroom instruction

Virginia's community colleges rely primarily on part-time faculty for classroom instruction, which may hinder student outcomes. As of Fall 2015, 74 percent of VCCS faculty were in part-time adjunct positions. Just 26 percent of VCCS faculty were classified as full-time, lower than the nationwide average of 35 percent and the average of 39 percent among states in the Southeast. The percentage of full-time faculty has remained relatively steady over the past 10 years, increasing just one percentage point during this period.

According to national research, extensive use of part-time faculty is generally associated with poorer student outcomes. Community colleges with a higher proportion of part-time faculty have lower graduation rates, and some research raises concerns about the ability of part-time faculty to provide high-quality instruction and interaction with students. Part-time faculty also may be less available to students and less likely to use rigorous instructional practices. One important exception to this is in the more technical and workforce-oriented fields, where part-time faculty working in their field are likely to have more practical experience with the subject matter. Relying heavily on part-time faculty may also limit a college's advising capacity because part-time faculty generally are not responsible for advising students.

VCCS recognizes the need for more full-time faculty and has taken steps to address the system's reliance on part-time faculty. Two efforts have focused on ensuring that part-time faculty are fully integrated into the community college and its operations. First, the system had implemented a temporary program to compensate full-time faculty for mentoring their part-time counterparts. Second, many colleges provide new part-time faculty an orientation, and VCCS offers a "First-Year and Adjunct Faculty Institute." VCCS has created new types of full-time faculty positions intended to attract faculty who otherwise would prefer an adjunct position. For example, VCCS created the position of Associate Instructor, which requires fewer non-teaching responsibilities than the standard full-time faculty position and therefore may appeal to some adjunct instructors. The Associate Instructor position is also non-tenured, giving colleges greater flexibility to increase or decrease the number of these positions as enrollment changes.

In 1997, VCCS conducted a study of the supports that colleges should provide to part-time faculty, and this study could be updated to identify potentially effective practices that could be encouraged or required system-wide. More broadly, VCCS has noted that measurably increasing the proportion of full-time faculty would require additional resources—either an increase in general fund appropriations or a substantial increase in tuition and fees.

Tutoring is linked to positive student outcomes, but some colleges cannot provide it to all the students who could benefit

JLARC staff surveyed executive-level staff at all 23 community colleges in Virginia. **Academic vice presidents** from 21 colleges responded, a response rate of 91 percent.

The survey included questions about student support services such as academic advising and tutoring as well as remedial courses.

In addition to academic advising, tutoring is a key support service for community college students. According to the research literature, students who seek and receive tutoring have higher grades and higher rates of completion. Virginia's community colleges differ widely in how they provide tutoring, with majorities of colleges reporting that tutoring is provided on a drop-in basis, by appointment, online, or in group sessions. According to the JLARC survey, 14 colleges (64 percent) have requirements for mandatory tutoring under some circumstances, such as when a student is required to enroll in a remedial English or math course. About one-third of colleges indicated that they do not have the capacity to provide tutoring services to most of the students who need them. As VCCS increases its capacity to provide academic advising services for students, it may need to assess the capacity of colleges to provide adequate tutoring services and identify strategies to ensure that students who could benefit from tutoring have access to quality tutoring at all colleges.

Colleges should build on efforts to better support newly enrolled students

The goal of **student development courses** is to equip students with the skills they need to be successful in college. Student development courses often address study skills, such as note-taking, test-taking, and time management skills; basic financial literacy; and academic and career planning. These courses count for one credit.

Setting newly enrolled community college students up for success, through the process known as “onboarding,” is critical to ensuring that students successfully earn a credential or transfer to a four-year institution. Two features of onboarding are especially important to student success: student orientation and student development courses (sidebar). The onboarding process can help students choose a field of study from the many career paths and credentials available at a community college, improve their study skills in preparation for the rigor of college-level courses, and generally become acclimated to their community college campus and aware of student support services.

Recent VCCS initiatives to streamline program choices and improve scheduling may support student success

Many students struggle to choose an academic or career path during their first semester. Some accumulate unnecessary credits if they change their major or career path and have to take additional courses. These unnecessary credits can substantially increase the time and cost of earning a credential, and reduce the rate at which students earn credentials. According to JLARC's cohort analysis, three-fourths of students accumulated more than the typical number of credits needed to earn a credential.

To address concerns that the number of program and course offerings can be overwhelming to students, VCCS is reducing the number of offerings through a strategy known as “meta-majors.” The meta-majors initiative is intended to help students choose a career path and credential program while making progress toward completion. Community colleges are in the process of grouping majors and credentials into a limited number of broad meta-majors, such as IT and health sciences. The initial

general education course work within a meta-major is standardized to satisfy any related major or credential. For example, a student can choose IT as a meta-major, enroll in general education IT courses, and then select a specific IT program without having to retake general education courses.

In addition, beginning in Spring 2018, VCCS will implement the Navigate software tool at each community college to guide students through the onboarding, academic planning, and advising processes. Navigate is an example of a nationwide effort by many community colleges—known as “iPASS”—to make greater use of technology to better support the academic advising and planning needs of students (sidebar). The Navigate software will have three main components. First, an academic planning component is intended to help students determine a career path and credential program. Students will be able to provide information on their career and academic interests, and the software will provide fields of study and credentials that potentially match those interests. Second, a course scheduling component is intended to help ensure that students can take courses at times most convenient to them. The software will gather information on students’ availability during a semester, allowing colleges to schedule courses around students’ work and other obligations. Third, an early alert component will replace the Student Assistance and Intervention for Learning Success system implemented by the VCCS system office in 2013-14.

While these initiatives have potential to improve student outcomes, students at risk of non-completion will still need person-to-person support services such as academic advising and tutoring. Restructuring community college courses into meta-majors may reduce the chance students would need to take additional courses if they switch their major or credential program. However, some students likely will still need assistance with choosing even a broad field of study and—eventually—a specific credential program. There is preliminary evidence from the research literature that systems like Navigate can improve student success, but only when coupled with person-to-person interaction with support staff.

Not all students complete orientation and student development courses when entering a community college

According to the research literature, students who attend orientation and make academic and social connections have higher rates of completion. All of Virginia’s community colleges provide orientation for new students, but orientation is not mandatory at most colleges, and some students do not attend. For example, one college requires new students to attend orientation but does not block them from enrolling in courses if they do not attend orientation. Staff at this college reported that in Fall 2016, about 20 percent of new students did not attend an orientation session.

Student development courses have positive impacts on academic skills and the rate at which students continue pursuing their credentials, and these positive impacts support degree completion and transfer. However, at least seven of Virginia’s community colleges do not require students to take the one-credit student development course during

Community colleges in several states have implemented a reform known as **integrated planning and advising for student success (iPASS)**. Community colleges in Colorado, New Mexico, Pennsylvania, and Massachusetts have adopted iPASS as part of their student success initiatives.

their first semester. VCCS policy requires all students to complete the student development course within their first 15 credits at a community college. Because part-time students enroll in fewer than 12 credits in a semester, this VCCS policy does not ensure that students complete the student development course during their first, second, or even third semester—too late to help with the transition to college-level work.

VCCS should require at least some new students to attend orientation and complete the student development course during their first semester. This change in policy would probably necessitate an increase in staffing resources at the colleges. However, VCCS could minimize the need for additional staffing by applying the requirements only to students at risk for non-completion who could benefit from regular, more comprehensive support services. VCCS could also exempt from these requirements students not enrolled in for-credit courses or not in a degree-seeking program. Orientation and the student development course are useful for all students, so for students who are full-time and low-risk, the system could encourage but not mandate participation. To determine how such a policy could minimize the need for additional staffing while ensuring that at-risk students are subject to it, VCCS could implement the policy on a pilot basis at two or three community colleges.

RECOMMENDATION 5

The Virginia Community College System should establish a policy requiring students to (i) attend orientation before enrolling in courses and (ii) complete the student development course during their first semester at a community college. This requirement should apply to students who are enrolled in for-credit degree or credential programs, who are at risk for not completing a degree or credential, and who could benefit from more regular, comprehensive support services.

VCCS should maintain its focus on improving student outcomes

In 2017, the system office created the **Student Success Center** to coordinate system-wide student success initiatives and share with colleges best practices for improving student outcomes.

VCCS has a strategic plan, *Complete 2021*, that sets an overarching goal of tripling the number of credentials awarded by 2021, but the plan is not accompanied by an actionable strategy for identifying and remedying the specific circumstances that contribute to poor student outcomes. In 2017 the system office created a Student Success Center (sidebar) to coordinate the office's student success initiatives and share best practices for improving student outcomes. The Student Success Center has collected college-specific student success plans from all 23 colleges. VCCS could use the information collected by the Student Success Center to develop a strategic plan that identifies the greatest challenges to student success, specific actions that could mitigate these challenges, and an implementation plan for undertaking these actions, to include a timeline for initiating them. The strategic plan should include both short- and long-term actionable strategies for improving success that are accompanied by specific, measurable objectives and a methodology for evaluating their impact on student outcomes.

RECOMMENDATION 6

The Virginia Community College System should develop a system-wide strategic plan that focuses exclusively on how the system will support student success. The plan should describe (i) how colleges will identify the factors associated with poor student outcomes and identify students who exhibit those factors; (ii) actionable strategies for mitigating the effects of those factors on student outcomes; (iii) a plan to implement each strategy; and (iv) how the impact of the strategies will be evaluated. The plan should be developed collaboratively with community college staff, including presidents, vice presidents for academic services, faculty members, and non-faculty professional advisers.

3 Effectiveness of Dual Enrollment and College Transfer Policies

SUMMARY Dual enrollment and college transfer policies are key to ensuring that Virginia students can maximize the potential financial and educational benefits of the community college system, but in Virginia, these policies are not consistently effective. Although dual enrollment students attend higher education institutions and earn postsecondary credentials at higher rates, many dual enrollment students do not reduce the total amount of time they take to attain a bachelor’s degree. Further, community college students who transfer to public four-year institutions in Virginia are less likely to earn a bachelor’s degree than non-transfer students, and those who do accumulate more credits than non-transfer students. The Virginia Community College System (VCCS), the Virginia Department of Education (VDOE), and the State Council of Higher Education for Virginia (SCHEV) should take action to ensure that the dual enrollment program and the state’s various college transfer initiatives are structured and implemented to maximize the potential benefits to students. VCCS, VDOE, and SCHEV should ensure that dual enrollment courses provide the content and quality needed for transfer and that transfer agreements are simplified and broadened so that they are more usable and accessible to students.

A key element of the value of attending a Virginia community college is that students may be able to reduce the total cost of earning a bachelor’s degree or other postsecondary credential by completing the first two years of their four-year degree program at a lower-cost two-year institution. However, realizing these benefits requires significant coordination between K-12 school divisions, community colleges, and four-year institutions, and a robust and effective state role in overseeing and facilitating coordination efforts. The state’s ability to effectively facilitate this coordination is challenged because Virginia’s higher education institutions have considerable autonomy, and their curricula and admissions requirements vary significantly. Similarly, the relative autonomy of school divisions limits the state’s ability to influence students’ transition between high school and higher education.

While numerous short-term certificates and two-year degrees can be earned at Virginia’s community colleges, and these credentials are a key benefit of a community college education, community college is also frequently promoted as a gateway to attaining a bachelor’s degree. However, for many community college students, completing an associate’s degree in two years, transferring seamlessly to a four-year institution, and completing a bachelor’s degree in two more years is unrealistic, particularly given that students are more likely to be part-time, low-income, and exhibit other factors that can slow the pace of progression through college.

Dual enrollment and four-year transfer initiatives are the state's key mechanisms to facilitate students' successful progression through postsecondary education. These mechanisms should be structured and administered as effectively as possible.

Higher proportion of dual enrollment students attend and complete college

A key objective of a dual enrollment program is to increase the likelihood that high school graduates will enroll in higher education and ultimately earn a postsecondary credential. In Virginia, this objective is being met. Seventy-five percent of dual enrollment students enroll in a public community college or university in Virginia after high school, compared to approximately 60 percent of non-dual enrollment students. Further, a higher proportion of dual enrollment students (51 percent) attain college credentials compared to non-dual enrollment students (35 percent). This is true for all three main credential categories—short- and long-term certificates, associate's degrees, and bachelor's degrees.

Dual enrollment reduces time and cost of credential attainment for community college students

Another key objective of the dual enrollment program is to reduce the time and cost of attaining a postsecondary credential, and this objective is generally being met for community college students. Dual enrollment students who enroll in community college after high school take about one semester less, on average, to earn a postsecondary credential than non-dual enrollment students, and both categories of students earn similar numbers of credits (Figure 3-1). Dual enrollment credits are earned in high school, at a lower cost to students than courses taken on a college campus. Therefore, for these students, dual enrollment courses likely reduced the total amount they paid to earn their credential.

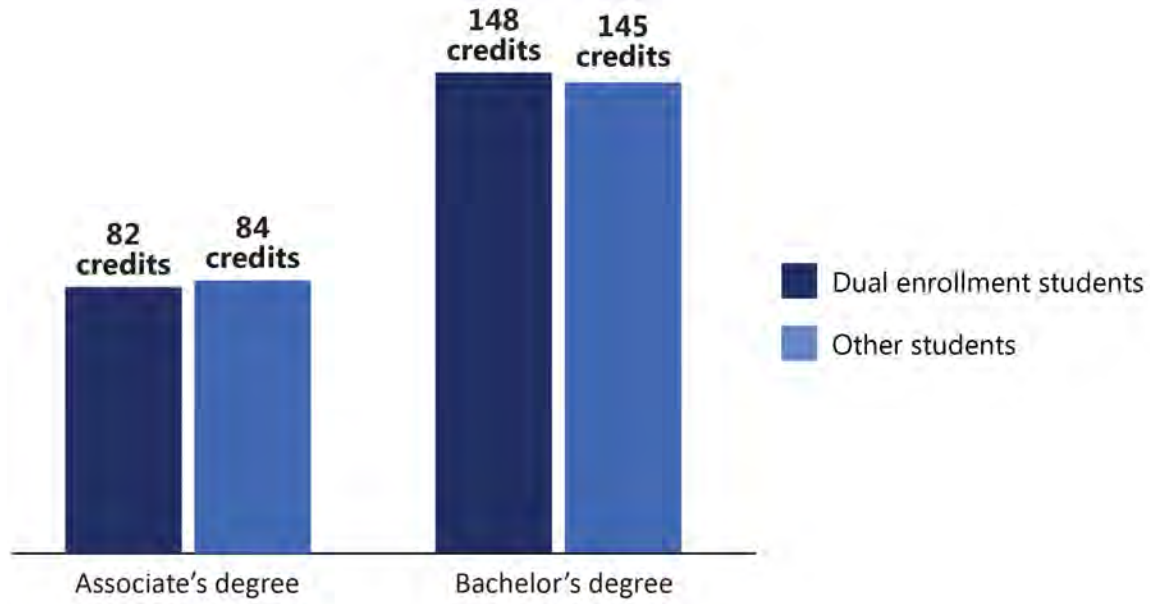
Dual enrollment does not as clearly benefit students at four-year institutions

Dual enrollment does not reduce the time and cost of attaining a postsecondary credential for the majority of students who enter a four-year institution directly after high school. Dual enrollment students take the same amount of time as non-dual enrollment students to earn a bachelor's degree—4.4 years. Moreover, the majority (69 percent) of dual enrollment students who started college at a four-year institution earned more credits than the average number earned by non-dual enrollment students. These students earn 11 more credits, on average, than non-dual enrollment students (Figure 3-2). These findings are particularly significant because dual enrollment students who enroll directly in a four-year institution account for the majority of dual enrollment students.

Dual enrollment allows high school students to earn college credit by taking dual enrollment courses that also fulfill high school diploma requirements. In Virginia, a few dual enrollment courses are offered by four-year institutions, but the vast majority are offered by the state's community colleges. In Fall 2016, 33,700 students were dual enrolled in Virginia.

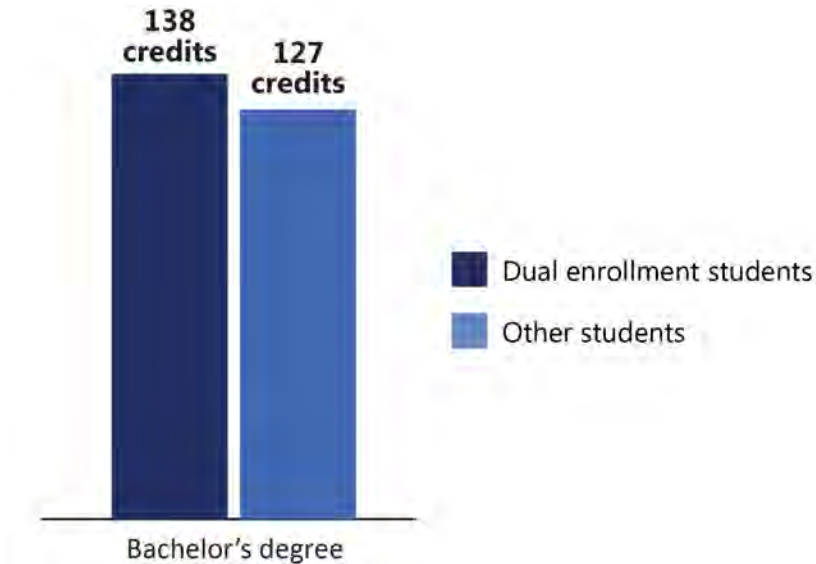
JLARC's analysis of dual enrollment student-level data focused on 12,332 dual enrollment students ages 17-19 who attempted at least 12 credits during their first year of enrollment in a Virginia community college. The analysis excluded dual enrollment students who did not enroll in a public higher education institution in Virginia.

FIGURE 3-1
Dual enrollment and non-dual enrollment students who enter community college after high school accumulate a similar number of credits



SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.
NOTE: Analysis reflects the credits attained by dual enrollment students over seven years since they first enrolled in community college or a four-year institution, with enrollment dates ranging from Fall 2008 to 2011.

FIGURE 3-2
Dual enrollment students who enter four-year institutions after high school accumulate more credits than non-dual enrollment students



SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.
NOTE: Analysis reflects the credits attained by dual enrollment students over seven years since they first enrolled in community college or a four-year institution, with enrollment dates ranging from Fall 2008 to 2011.

Four-year institutions are reluctant to accept dual enrollment credits

Academic departments at four-year institutions determine whether dual enrollment credits transfer, and if so, whether they count toward the student's major or as elective credits. Staff at several four-year institutions expressed concerns about the quality of dual enrollment courses taught in high schools and observed that not all dual enrollment courses are accepted for credit by four-year institutions. The primary concern is that school divisions and colleges are not effectively ensuring that the dual enrollment courses that are taught in high schools reflect the quality of college-level course work, diminishing the potential to be applied toward the requirements of four-year degrees. Staff at both VCCS and SCHEV confirmed that four-year institutions have expressed a reluctance to apply some dual enrollment credits to students' majors.

The following summarize the concerns expressed by the chief transfer officers at four of the state's four-year institutions:

- One officer stated that to improve dual enrollment in Virginia, the state should improve the quality of the courses by ensuring that high schools provide the level of instruction needed for college-level courses. This individual observed that dual enrollment course work taken in a high school classroom did not prepare students for the four-year institution's course work.
- Another officer stated that his university does not accept dual enrollment credits for a specific freshman-level English course.
- Two other chief transfer officers expressed general concerns with the quality of dual enrollment courses and with the consistency of the content that is taught. One stated, "I think there's broad concern about dual enrollment."

Many community college dual enrollment coordinators observed that four-year institutions are reluctant to accept dual enrollment credits:

- "Some [four-year] colleges do not want to accept dual enrollment courses as transfer."
- "The community colleges must take full accountability for the quality of dual enrollment offerings. We must work with the universities to ensure transferability. It is unacceptable for the same course to be accepted for transfer if taken on the college campus, but rejected if offered through dual enrollment."
- "Four-year schools are reluctant to take the courses. Having faculty buy-in with dual enrollment to review syllabi and provide professional development is critical."
- "Statewide, it would benefit students and parents if dual enrollment was more highly regarded by the four-year colleges/universities."
- "Students report that UVA does not accept some of their credits if completed as dual enrollment (particularly science courses)."

- A community college executive reported that an issue he finds most troubling is the transferability of dual enrollment courses. This individual asked, “Once we’ve ensured consistency and quality, how can four-year institutions not accept these credits for transfer?” and said that one institution will honor their dual enrollment courses while others will “cherry pick.”

To improve the effectiveness of dual enrollment programs in Virginia schools, the state needs information from four-year institutions on actual transfer of course credits. With this additional information, SCHEV and VCCS could evaluate the extent to which the excess credits accumulated by dual enrollment students are earned through dual enrollment courses that are not accepted for transfer.

This data could be captured in the student-level data that is maintained by VCCS and SCHEV. One of the challenges of such an effort would be determining whether dual enrollment and community college credits earned by students who attain their bachelor’s degree are counted toward the student’s major, given the tendency of students to change majors. At a minimum, however, SCHEV and VCCS could begin tracking whether dual enrollment credits are accepted for credit by two- and four-year institutions. Actions could then be taken to improve the transferability of courses, including taking steps to improve their quality, if necessary, and developing strong partnerships between community colleges and four-year institutions, starting with those that are logical partners geographically. To the extent that there is additional data to collect or analyze, tracking the acceptance of dual enrollment credits may require additional staffing resources.

The 2017 General Assembly enacted legislation to improve the transferability of dual enrollment credits (sidebar). SCHEV is required to develop a policy for higher education institutions to follow for granting general education course credit to dual enrollment students. Such a policy could lead to more consistent treatment of dual enrollment credits by the state’s four-year institutions. Collecting data on each institution’s treatment of dual enrollment credits could help inform the policy being developed by SCHEV.

New legislation requires SCHEV to develop a **policy on course credit for dual enrollment courses**. Under HB 1662 (2017), the new state-wide policy must include the conditions under which four-year institutions must grant general education course credit. Across institutions, course credit must be as consistent as possible.

RECOMMENDATION 7

The General Assembly may wish to include language in the Appropriation Act to require the state’s public four-year higher education institutions to report, for dual enrollment students, (i) the total number of dual enrollment credits on students’ transcripts; (ii) the total number of those credits that were accepted for credit by the institutions; and (iii) whether the credits were applied to elective requirements, program requirements, or other requirements. This information should be reported to the State Council of Higher Education for Virginia (SCHEV) and the Virginia Community College System (VCCS) at the end of the 2017-18 academic year and in subsequent years as necessary to improve the quality of dual enrollment courses and the state’s dual enrollment policies. VCCS and SCHEV should use this information to identify dual enrollment courses that are not routinely accepted for credit.

Community colleges do not consistently ensure the quality of dual enrollment courses

JLARC staff surveyed dual enrollment coordinators at all 23 community colleges in Virginia. Coordinators were asked about various topics, including types of dual enrollment courses the colleges offer and practices used to ensure the quality of dual enrollment courses. 22 of 23 dual enrollment coordinators responded to the survey, a response rate of 96 percent. (See Appendix B for research methods.)

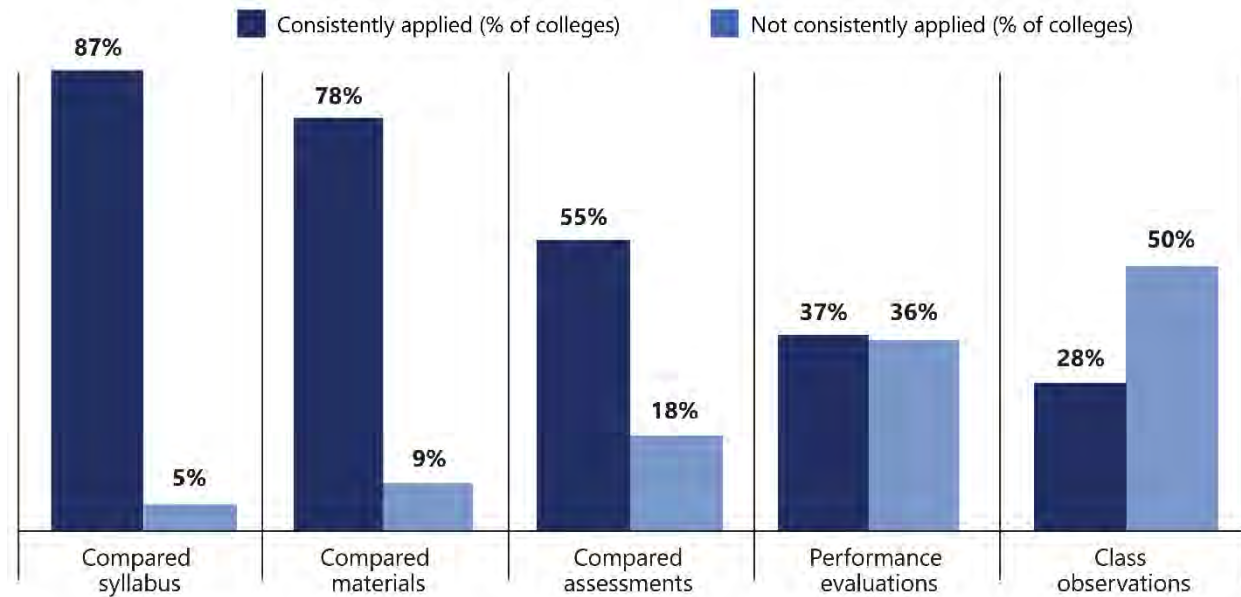
National Alliance of Concurrent Enrollment Partnerships recommends that (1) colleges verify that the teaching methods, materials, and syllabi used in high school dual enrollment courses are equivalent to on-campus courses; (2) dual enrollment instructors receive professional development; (3) college faculty conduct classroom observations; and (4) dual enrollment instructors possess credentials that qualify them to teach college courses.

Community colleges need to proactively oversee the development and teaching of dual enrollment courses because most courses are taught in high school classrooms by high school teachers. College staff at 16 community colleges reported that ensuring the quality of dual enrollment courses taught in high school and compliance by school divisions with program requirements are among their most problematic challenges (sidebar). The workload associated with overseeing high school-based dual enrollment courses can be highly demanding—individual colleges are responsible for, on average, 82 different courses taught at 11 different public high schools in their service areas. Further, many high schools offer “blended” dual enrollment courses, in which dual enrollment and non-dual enrollment high school students are placed in the same course. Maintaining college-level rigor is especially difficult in blended classrooms, according to staff at the VCCS system office and some colleges and four-year universities.

Professional development for high school dual enrollment instructors can be used to standardize and ensure the quality of dual enrollment courses designed and taught in high schools, but it is not used consistently or effectively by all colleges. During the 2016-17 academic year, many colleges did not include key topics in their dual enrollment professional development efforts, and most colleges do not mandate attendance by new instructors.

Colleges and school divisions can ensure course quality by using nationally recommended practices (sidebar), but Virginia’s community colleges do not uniformly or consistently use these recommended practices (Figure 3-3). Few community colleges consistently apply those practices that are key to ensuring instructional quality and measuring students’ mastery of college-level material. According to 11 dual enrollment coordinators, classroom observations were conducted for fewer than half of their dual enrollment courses during the 2016-17 academic year. Only eight colleges reported comparing course assessments, such as tests and examinations, to those used in the on-campus course for all or most dual enrollment courses. Moreover, while most colleges reported using at least some key practices for all or most of their dual enrollment courses, no colleges consistently used all of the recommended practices.

FIGURE 3-3
Colleges inconsistently apply recommended quality assurance practices to dual enrollment courses



SOURCE: JLARC survey of community college dual enrollment coordinators, 2017.

NOTE: Numbers do not add to 100% because some dual enrollment coordinators responded that they “Do not know” whether the practices are consistently applied to dual enrollment courses taught in high schools.

VCCS internal audits have documented problems with colleges’ inconsistent use of recommended practices. A 2012 audit found that colleges were not consistently conducting evaluations of instructors or ensuring that course syllabi were equivalent to on-campus courses. Later audits determined that inconsistent use of recommended practices was still a problem. For example, these audits found instances in which dual enrollment course syllabi were not equivalent to the syllabi used for the comparable on-campus course, that there was inadequate oversight of dual enrollment faculty by college faculty, and that some dual enrollment instructors did not have the credentials needed to qualify as VCCS faculty.

Applying these recommended practices appears to prompt colleges to make improvements to their dual enrollment courses. During the 2016-17 academic year, utilization of these practices resulted in 13 colleges making changes to course syllabi, 11 colleges modifying dual enrollment course materials, and nine colleges removing ineligible students from their dual enrollment courses. By ensuring that all dual enrollment programs consistently use recommended practices, VCCS can improve the likelihood that dual enrollment credits will be applied by four-year institutions to students’ degrees.

RECOMMENDATION 8

The Virginia Community College System, in coordination with the Virginia Department of Education, should modify the Governing Principles for Dual Enrollment to require the use of nationally recommended practices for dual enrollment programs. Required practices should include (i) periodic review of course materials, to ensure that content and rigor are aligned with the on-campus equivalent course; (ii) recurring, formal evaluation of instructors; and (iii) periodic classroom observation.

Transferability of dual enrollment courses is not always clear

A Uniform Certificate of General Studies is designed for students intending to transfer to a four-year institution. The certificate requires up to one year of courses that cover the core general education competencies, such as communication, critical thinking, and quantitative reasoning (§ 23.1-907.F of the Code of Virginia).

According to community college staff, dual enrollment students have earned an assortment of community college credits that do not count toward their chosen degree or credential. More than one-third of colleges reported that they sponsor courses that do not count toward an academic or technical program at their colleges. Community colleges are required by statute to offer dual enrollment courses that count toward the completion of a one-year uniform certificate of general studies or a two-year associate's degree in general education (sidebar), and this requirement is being followed. However, colleges are not prevented from offering additional dual enrollment courses that do not count toward any of the credentials they offer. School division staff frequently initiate the development of new dual enrollment courses, and topic selection is often driven by student interest and availability of qualified instructors. As a result, some dual enrollment courses are not designed or coordinated to qualify for credit at the sponsoring community college.

Most colleges that offer courses that do not count toward any of their own programs reported partnering with a neighboring community college to which the courses do transfer. However, students may not be aware of limits on the use of their college credits. When students enroll in dual enrollment courses, they may wrongly assume that course credits will be accepted at the community college that is sponsoring the course. Further, because the sponsoring college does not itself offer an on-campus equivalent course, the college is not necessarily equipped to ensure the quality and rigor of the course.

Steps should be taken to ensure that dual enrollment students are fully aware of the transferability of their dual enrollment course to a community college academic or career and technical program. The Governing Principles for Dual Enrollment should be modified to require community colleges and school divisions to identify (1) each dual enrollment course's equivalent non-dual enrollment course, (2) the academic or career and technical programs that accept the credits, and (3) which community colleges offer the relevant academic and career and technical programs. The VCCS system office should develop a database of all dual enrollment courses so that system office

staff can conduct system-wide reviews of the transferability of dual enrollment credits. Currently, there is no central repository for information on dual enrollment course offerings.

RECOMMENDATION 9

The Virginia Community College System, in coordination with the Virginia Department of Education, should modify the Governing Principles for Dual Enrollment to require community colleges and school divisions to clearly disclose to students taking these courses, for each dual enrollment course, the equivalent non-dual enrollment course, the academic and career and technical programs that will accept the course's credits, and the community colleges that offer those programs.

RECOMMENDATION 10

The Virginia Community College System should develop a database for maintaining information on all dual enrollment courses offered in the state. The database should include a description of each course, the location where it is taught, the sponsoring community college, the specific academic or career and technical programs that will accept the course's credits, and which community colleges offer those programs.

Difficulty recruiting qualified instructors contributes to program shortcomings

Some dual enrollment programs have had difficulty recruiting high school teachers who qualify as dual enrollment instructors. The shortage of qualified instructors has limited the development of in-demand courses, increased the use of the less desirable “blended” course approach, and increased the number of dual enrollment courses that were unrelated to a specific credential program at the college. Most colleges (77 percent) identified instructor recruitment as a challenge. This challenge is not confined to rural areas of the state or smaller community colleges and school divisions; some of the state's largest dual enrollment programs identified the lack of qualified instructors as a key challenge.

VCCS requires that dual enrollment instructors meet the faculty qualification guidelines established by the Southern Association of Colleges and Schools Commission on Colleges, and these requirements can be difficult for high schools to meet. A key requirement is a graduate degree in the subject to be taught by the instructor, or—at minimum—a master's degree in any subject, with at least 18 graduate course credits in the subject to be taught. According to college staff, high school teachers are unlikely to have a graduate degree in a specific academic subject other than education, or possess all of the 18 graduate credits required in lieu of a graduate degree. Further, individuals with graduate degrees in high-demand subjects, such as science, math, and technology, have more lucrative employment options than teaching at the high school level.

Other states have faced challenges recruiting qualified instructors for dual enrollment courses taught in high schools, and like Virginia, most other states follow the requirements of their higher education accrediting bodies. Some have provided financial aid to help instructors earn the credentials that will qualify them to teach a dual enrollment course. For example:

- Minnesota requires school districts to set aside a portion of their revenues for professional development initiatives, which can include grants to teachers to pay for course work.
- Wyoming has a loan forgiveness program for public school teachers who take courses to qualify as an adjunct professor.
- Ohio established a \$5 million competitive grant program to help high school teachers complete course work necessary to qualify as dual enrollment instructors.

Virginia could establish a program of financial assistance for high school teachers to obtain the credentials necessary to qualify as dual enrollment instructors. Funds could be awarded in the form of grants for teachers who commit to completing necessary course work and teach a course that can be credited toward the sponsoring college's own credential or degree requirements as well as the degree or credential requirements of a variety of Virginia's public four-year institutions. The grant program could be (1) prioritized for subject areas where the need for instructors is greatest and (2) limited to colleges and school divisions that use recommended practices for ensuring the quality of dual enrollment courses.

RECOMMENDATION 11

The General Assembly may wish to consider creating a financial assistance grant program to help high school teachers obtain credentials necessary to teach dual enrollment courses.

Irregular dual enrollment funding model leads to statewide variation in program costs

The approach taken to funding dual enrollment programs is unnecessarily inefficient and allows for wide variation across the state in how much school divisions, colleges, and students pay for courses. Each college negotiates separately with each school division in its service area to determine the percentage of dual enrollment course tuition and fees the school divisions will pay.

Colleges receive less net income for dual enrollment courses than for traditional on-campus courses. School divisions pay tuition to the community colleges, and the colleges reimburse the school divisions for a portion of tuition. Across the state, reimbursement rates range from 60 percent to 100 percent, with an average of 89 percent. Some school divisions qualify for higher reimbursement from colleges by agreeing to

utilize certain practices. For example, a school division that agrees to provide textbooks to dual enrollment students can negotiate a higher reimbursement rate.

The prices that students pay for dual enrollment courses vary statewide, and in a few cases there is even variation within the same school division. Some of the variation in student costs is due to the reimbursement structure. For example, some school divisions charge students for unreimbursed costs, and others do not.

Colleges and school divisions both incur costs directly related to the administration of the dual enrollment program, and these administrative costs are not covered by the existing funding approach, according to VCCS analysis. Costs are minimized because most dual enrollment courses are taught in high schools using existing high school infrastructure and faculty, and course oversight is performed by existing community college faculty. However, high schools do sometimes hire faculty specifically to teach the dual enrollment courses that are in greatest demand, and most community colleges employ full-time dual enrollment coordinators to carry out the day-to-day operations of the program. All colleges reported that they target a portion of their student support services, such as advising and tutoring, specifically to dual enrollment students, which is also a source of additional costs.

To be sustainable in the long term, as well as predictable and efficient, the funding model for dual enrollment should be modified to ensure that, at a minimum, the costs incurred by colleges and school divisions specifically for administering dual enrollment courses are paid for and that a single funding formula is uniformly used by all school divisions and colleges. The following are examples of potential unique costs that should, at a minimum, be covered by a dual enrollment funding model:

- costs incurred by the colleges to (1) employ at least one full-time dual enrollment coordinator, (2) have college faculty and staff conduct course development and oversight activities, and (3) provide training opportunities for high school teachers; and
- costs incurred by school divisions to conduct recruitment and professional development activities for dual enrollment instructors.

Detailed data has not been collected by VCCS or VDOE to precisely calculate colleges' and school divisions' costs related to dual enrollment, and this data is necessary to develop a robust funding model. VCCS, with assistance from VDOE, should develop a detailed data collection instrument that can be distributed to all colleges and school divisions for the purpose of collecting data on distinct dual enrollment program costs. This effort should span the length of at least one semester, and steps should be taken to distinguish expenditures attributable directly to dual enrollment program activities.

This data could be used to develop a tuition and fee structure specific to dual enrollment courses. For example, a figure could be calculated reflecting the difference between (1) the amount of general funds spent on each dual enrollment student and

Most students participating in Virginia's dual enrollment program take courses taught in high schools by high school instructors; therefore, JLARC staff focused on this aspect of the dual enrollment program.

Smaller numbers of students take dual enrollment courses on community college campuses or taught in high schools by community college faculty.

“ [School] superintendents across the Commonwealth talk to each other and some are asking why [dual enrollment] is free for their neighbor (at one college) and it costs at another (at a different college). ”

— Community college staff

(2) the costs incurred by the high schools and colleges attributable to the dual enrollment program. This figure could represent the tuition and fees needed to cover the cost of the program.

“For so many in our area, dual enrollment is the only door to college.... Charging tuition ... is a significant barrier for those students, especially if they come from a home where higher education is not valued.”

— Community college staff

Depending on whether the cost of tuition and fees is passed on to students, or whether it is covered by school divisions, the cost of dual enrollment courses would increase under this approach for those students who do not currently pay for dual enrollment courses. High school students are not currently eligible for state or federal financial aid for college courses taken in high school. Staff at several community colleges observed that increasing student costs for dual enrollment would likely prevent the lowest-income students from taking advantage of dual enrollment opportunities.

The impact on students and the demand for dual enrollment courses could be mitigated by phasing in the new funding model and by developing a financial aid program targeted at the lowest-income dual enrollment students. Sources of financial aid funding could be general funds; other options include funding from the Virginia Foundation for Community College Education and colleges' individual foundations, which have been used in the past to provide financial assistance to community college students. To ensure that further investment in the program—by families, the state, or other entities—is maximized, such an effort could be deferred until VCCS has taken action to ensure the quality and transferability of dual enrollment courses.

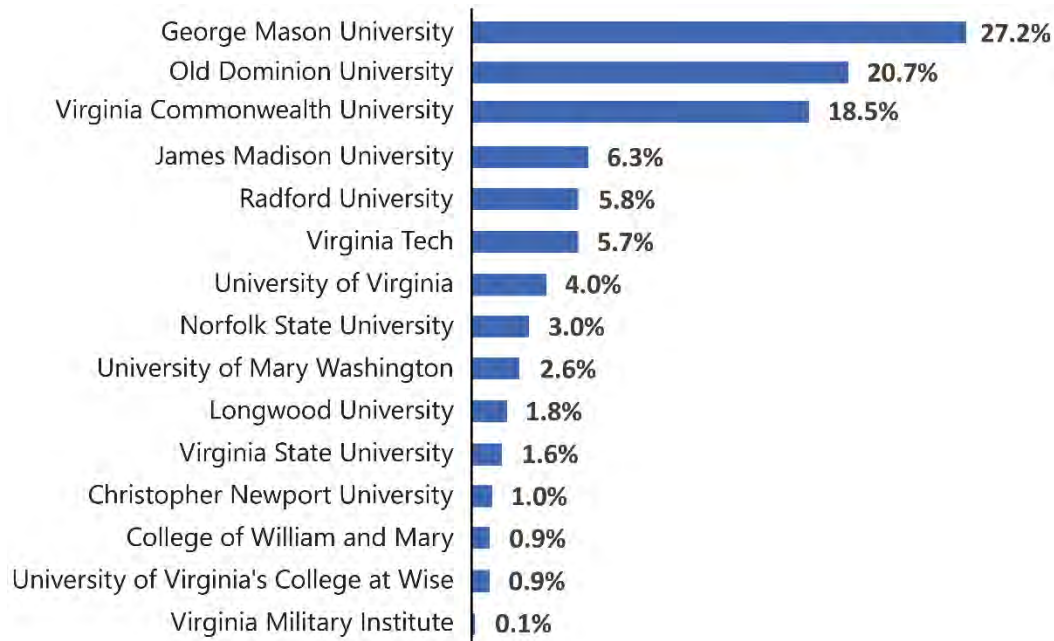
RECOMMENDATION 12

The Virginia Community College System, in coordination with the Virginia Department of Education, should collect data from each community college and each school division on the expenditures that are directly attributable to the dual enrollment program. This expenditure data should be used to develop a single, statewide dual enrollment funding formula and a tuition and fee structure that is consistent across all courses and colleges and that reflects the costs of operating a high-quality dual enrollment program.

Substantial number of community college students transfer to four-year institutions each year

A substantial and growing number of community college students transfer to public four-year institutions in Virginia each year. More than 11,600 students transferred in 2014-15, and the number of transfer students has increased an average of 4.4 percent annually since 2007-08. Nearly two-thirds of VCCS students who transferred to a public four-year institution in 2014-15 went to George Mason University, Old Dominion University, or Virginia Commonwealth University (Figure 3-4). Substantially smaller percentages of transfer students went to other institutions, such as Virginia Tech, the University of Virginia, and the College of William and Mary. More than half of transfer students in 2014-15 came from just two community colleges: Northern Virginia, and Tidewater.

FIGURE 3-4
Two-thirds of transfer students went to three four-year institutions (2014-15)



SOURCE: JLARC analysis of Two-Year TR03 Report: Transfer Origins and Recipients, SCHEV.
 NOTE: Excludes community college students transferring to private four-year institutions.

Uncertainty of transfer process and inaccessibility of transfer resources diminish potential benefits

Transfer articulation and guaranteed admissions agreements are critical to facilitating the transfer process because they are intended to provide for admission into a four-year institution and ensure that community college credits fully transfer as credit toward a student’s major at their four-year institution. However, the agreements have proliferated, are not standardized, are not kept up to date, and are not sufficiently accessible to students. The agreements are difficult for students to understand and leverage, and moreover, many do not provide sufficient assurance that four-year institutions will grant program credit for community college courses. Agreements and other information about the transfer process can be difficult for students and their advisers to find because they are not maintained in a single, accessible location.

For a student to fully realize the potential benefits of the transfer strategy, at least three conditions have to be met.

1. The student would need to choose a public four-year institution and a major soon after being admitted to the community college so that the credits needed for transfer to a four-year institution can be earned in the first two years.

Transfer agreements between Virginia’s public community colleges and four-year institutions are required by statute (§ 23.1-907).

The **specific general education courses** a student should take during their first two years will depend on their intended major and four-year institution. For example, a community college student would need to complete different general education math courses for a bachelor’s degree in mechanical engineering versus psychology.

2. The four-year institution would need to accept the student in both the general undergraduate program and the student's chosen degree program.
3. The four-year institution would need to accept the student's community college course work for credit in the student's chosen degree program.

If these three conditions are not met, the student will not fully benefit from the transfer strategy or may need additional credits to earn a bachelor's degree. Each additional credit would reduce the potential savings from using the transfer strategy.

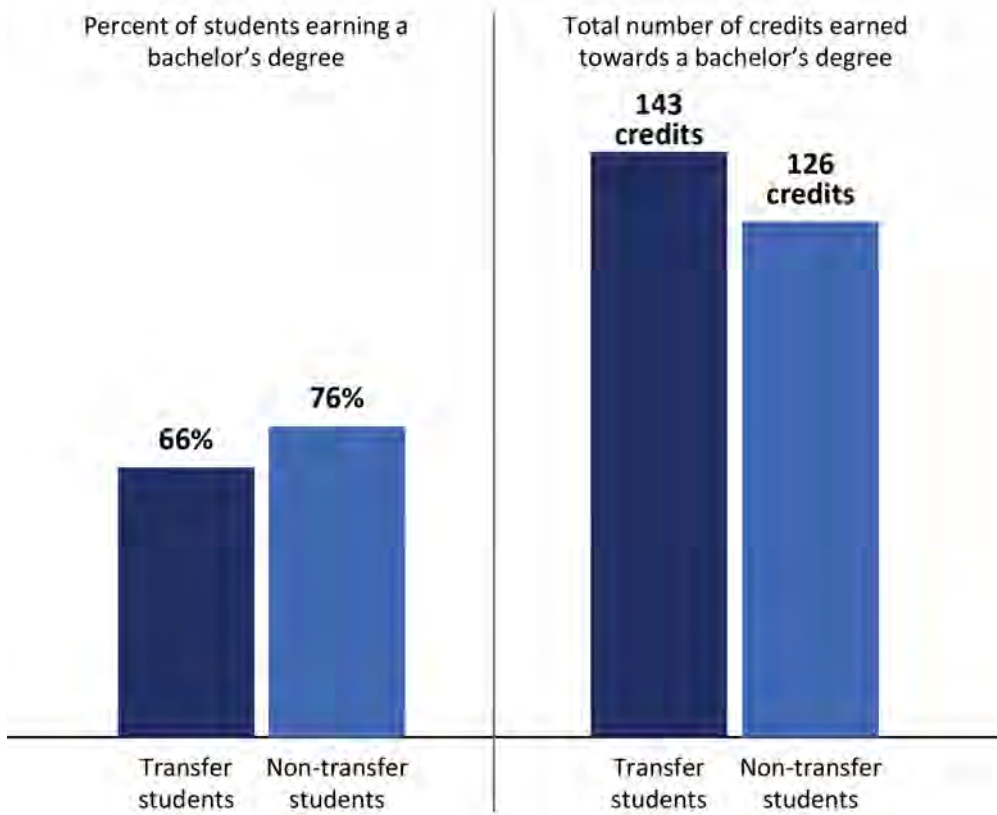
Through the transfer provisions in the Code of Virginia, the General Assembly established a strategy for earning a four-year degree by starting in community college. Foundational to this strategy are the agreements between individual four-year institutions and community colleges. Promoting effective transfer agreements is the state's primary role in ensuring that the transfer strategy meets the expectations of students and their families and provides academic and financial benefits as intended.

Transfer students take longer and accumulate more credits to earn a bachelor's degree

Compared to students directly entering a four-year institution, students transferring from a community college earn bachelor's degrees at a lower rate and accumulate more credits toward a degree. Transfer students at public four-year institutions earned bachelor's degrees at a rate of 66 percent, compared to 76 percent of non-transfer students (Figure 3-5). The median number of years transfer students took to complete their degree was five years, compared to four years by non-transfer students.

Transfer students also tended to accumulate a larger number of credits while earning their bachelor's degrees—a median of 143 credits, compared to 126 for four-year students (Figure 3-5). The additional 17 credits accumulated by the typical transfer student are roughly equivalent to a full semester, and would cost students \$2,420 at a community college or \$6,780 at the average cost of tuition and fees charged by public four-year institutions. One-fourth of transfer students who earned a bachelor's degree accumulated at least 31 credits more than the typical non-transfer four-year student. That represents an additional year of courses, at a minimum cost to the student of \$4,420 if the additional courses are taken at the community college, and \$12,360 if the courses are taken at a four-year institution.

FIGURE 3-5
Transfer students earn bachelor’s degrees at lower rates and accumulate more credits compared to other four-year students



SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.
 NOTE: Analysis reflects the experience of students over seven years who first enrolled in college between Fall 2008 and Fall 2011.

Transfer agreements have proliferated and are difficult to use

Community college students should be able to use transfer agreements to identify and take a set of courses while in community college that will lead to a bachelor’s degree, but across Virginia's public institutions, transfer agreements are numerous, overly complicated or restrictive, inconsistent across schools, and not sufficiently accessible. The lack of organization and accessibility diminishes the efficiency and effectiveness of the transfer strategy. As required by statute, community colleges and four-year institutions have developed agreements that provide for admission and the transfer of credits to four-year institutions (Table 3-1). A total of 38 guaranteed admissions agreements have been developed by community colleges and four-year institutions. JLARC staff identified nearly 300 transfer articulation agreements between community colleges and four-year institutions, covering a wide range of transfer pathways leading from an associate’s degree to various bachelor’s degrees. Because there is no single repository for articulation agreements, the total number of these agreements is not known by VCCS or SCHEV staff.

TABLE 3-1**Two types of transfer agreements are primary mechanisms to facilitate transfer from community colleges to four-year institutions**

Type of agreement	Description
Guaranteed admission agreement	Guarantees that students meeting certain academic standards will be admitted to the public four-year institutions without going through the competitive admissions process. Does not guarantee admission to academic programs.
Articulation agreement	Lists the community college courses needed to satisfy course requirements for specific programs or majors at four-year institutions.

Transfer articulation agreements and course equivalency guides provide insufficient assurance that students will receive program credit for courses

While transfer articulation agreements appear to be useful for some transfer students, many have shortcomings that significantly limit their use. Some agreements are four or more years old. Given that curricula at community colleges and four-year institutions can change every few years, these agreements may no longer accurately list the community college courses needed to satisfy the prerequisites for a given major. In addition, many articulation agreements do not explicitly state whether community college courses will be accepted as program credit or elective credit. Many are also not clear about whether a student must complete their associate's degree in order to transfer under the articulation agreement. (See Appendix D for examples of transfer articulation agreements.)

Most community colleges and four-year institutions make substantial efforts to assist students with their transfer options, in part because the variability and complexity of the various agreements leads to confusion and uninformed decisions. Most community colleges responding to the JLARC survey reported within the past two years

- holding informational events for students interested in transferring,
- designating specific advising staff to assist prospective transfer students,
- arranging for students to visit four-year institutions, and
- connecting students with faculty or advisers at four-year institutions.

Several four-year institutions also provide online course equivalency guides that indicate, for a given community college course, the equivalent course at the four-year institution. In interviews, staff of four-year institutions reported visiting community colleges and, in some cases, providing transfer advisers on the community college campus for weekly advising sessions.

VCCS and SCHEV are currently collaborating to develop “program maps” that more clearly specify the community college courses required to transfer into a particular program. As envisioned by VCCS system office staff, the program maps would be unique to the community college and four-year institution involved in a given transfer pathway. The maps would guarantee admission to the program if certain academic

standards were met, such as a minimum GPA in general education and prerequisite courses. Tennessee makes extensive use of such program maps through its Tennessee Transfer Pathway program. The program includes dozens of transfer pathway guides that guarantee admission into specific programs at a four-year institution for students who complete all required associate's degree courses at their community college.

The development of program maps in Virginia could improve the ability of community college students to transfer to their chosen program and four-year institution while ensuring that community college credits transfer toward their program. For qualifying students, the maps would use an easily understood format to guarantee admission to a particular program and the full transfer of community college credits to the four-year institution. Many of the transfer articulation agreements used in Virginia lay out the corresponding courses at a given community college and four-year institution but do not explicitly guarantee that credits will transfer or students will be admitted to the four-year program.

Given these potential benefits, the General Assembly could require VCCS and public four-year institutions in Virginia to develop program maps. SCHEV is required by statute to provide guidelines for the development of guaranteed admission and transfer articulation agreements and to serve as the coordinating council for the state's public institutions of higher education (§ 23.1-907.D). In this capacity, SCHEV could specify which transfer pathways should be supported by program maps and the content of maps. Developing effective programs maps can require considerable time and effort because faculty from the participating community college and four-year institution need to agree on a curriculum for associate's degree courses and courses in the program. The General Assembly could enact legislation to require that program maps be developed only for the most commonly used transfer pathways.

The 2017 General Assembly enacted legislation to improve the transferability of community college courses to four-year institutions (sidebar) by requiring the development of a standard list of general education courses guaranteed to transfer from community colleges to four-year institutions. SCHEV is creating a task force to implement this initiative, along with the new policies on dual enrollment. Recommendations 13 and 14 could be implemented as part of the task force's efforts.

RECOMMENDATION 13

The General Assembly may wish to amend the Code of Virginia to require the State Council of Higher Education for Virginia to develop guidelines for the state's public two- and four-year higher education institutions for developing program maps for transfer pathways. These guidelines should specify (i) the most commonly used transfer pathways for which program maps should be developed and (ii) standard content to be included in each program map.

In 2017 the General Assembly enacted SB 1234, which requires development of a **passport credit program** by July 1, 2020. The program will consist of uniform standards and competencies for general education courses guaranteed to transfer from community colleges to four-year institutions.

RECOMMENDATION 14

The General Assembly may wish to amend the Code of Virginia to require that each public four-year institution in Virginia develop, in collaboration with the Virginia Community College System, program maps for transfer pathways. The program maps should be consistent with the guidelines to be developed by the State Council of Higher Education for Virginia (Recommendation 13).

Developing the program maps described in Recommendations 13 and 14 may diminish the need for guaranteed admissions agreements, and this should be evaluated as part of the development of program maps.

Guaranteed admissions agreements benefit a minority of transfer students

Guaranteed admission agreements are foundational to the effectiveness of the transfer strategy and minimizing the costs of earning a four-year degree because they guarantee students admission to a four-year institution without going through the competitive admissions process. However, it appears that a majority of students who transfer to a four-year institution do not meet the terms of the agreements. Most four-year institutions are not regularly tracking the percentage of VCCS students who transfer under a guaranteed admissions agreement, but interviews with four-year institutions suggest that less than one-fourth of students transfer under these agreements. According to staff of one four-year institution, just 25 percent of students who transfer from community college use the guaranteed admissions agreement. Staff at another four-year institution estimated no more than 20 percent of transfer students use the agreements. Two other four-year institutions characterized the percentage as “small.” All agreements require students to have completed an associate’s degree, and most agreements have restrictions that allow four-year institutions to maintain their admissions standards through a minimum GPA for community college courses, which ranges from 3.6 for the College of William and Mary to 2.0 for three other four-year institutions. Many community college students who transfer do not meet these two requirements and therefore do not transfer under a guaranteed admissions agreement.

The relatively low percentage of students who transfer under guaranteed admissions agreements appears to reflect the fact that many students do not earn their associate’s degree before transferring. According to SCHEV data, in recent years the percentage of students who transfer without their associate’s degree has been about 45 percent. SCHEV is currently developing guidelines that would require four-year institutions to develop policies for providing guaranteed admission to community college students who have earned community college credits but have not received an associate’s degree.

Students using guaranteed admissions agreements may still need to take additional prerequisite courses after transferring

Most guaranteed admission agreements include provisions that students may need to take additional courses within or outside their program or major after transferring. Four agreements stipulate that the transfer-oriented associate's degree fulfills the general education requirements of the four-year institution but may not fulfill specific departmental requirements or requirements for a student's major. One guaranteed admission agreement specifies additional courses students need to complete in order to satisfy general education requirements. The College of William and Mary requires that students who transfer with an associate's degree must complete an additional nine credits of lower-division courses at the college, including courses in foreign language and arts proficiency.

Transfer resources are not well organized or readily accessible to students

There is no single, accessible repository for transfer agreements and other resources available to transfer students and their advisers. As a result, it can be difficult and time-consuming for community college students and their advisers to find information about transferring to a four-year institution. Transfer agreements, course equivalency guides, and general information about transfer are maintained on numerous websites, including the Virginia Education Wizard (sidebar) and websites for the 38 individual two- and four-year institutions. For these reasons, the total number of transfer agreements currently in effect is not known.

SCHEV is required by statute to develop a state transfer tool students can use to determine whether specific community college courses will transfer to four-year institutions (§ 23.1-908.A-B). However, according to SCHEV staff, the online tool has not been functional for more than six months and has been difficult to maintain because four-year institutions do not consistently provide their transfer agreements to SCHEV as required by the agency's guidelines for transfer agreements. As a centrally governed community college system, VCCS regularly receives transfer agreements from the community colleges. The Virginia Education Wizard contains the guaranteed admissions agreements and many of the transfer articulation agreements that have been developed. VCCS could be given statutory responsibility for building and maintaining the state's central repository for all agreements, course equivalency tools, and other transfer information. VCCS could use the Virginia Education Wizard or another website as a repository. The General Assembly could then direct public four-year institutions to regularly submit to VCCS their guaranteed admissions and transfer articulation agreements, course equivalency tools, and any other transfer information they provide to students.

The Virginia Education Wizard is a website maintained by VCCS that provides a broad range of information about pursuing higher education and a career path. Part of the website is dedicated to resources and information for transfer students.

RECOMMENDATION 15

The General Assembly may wish to amend § 23.1-908 of the Code of Virginia as follows: (i) to require that the Virginia Community College System (VCCS) develop and maintain a single online repository for all agreements, course equivalency tools, and other informational resources related to transferring from a community college to a public four-year institution; (ii) to require the State Council of Higher Education for Virginia to send to VCCS all the transfer resources that it has collected; and (iii) to require all public four-year higher education institutions to keep their transfer agreements updated and annually send to VCCS all new and revised transfer agreements and other transfer-related resources.

Lack of information about transfer student outcomes hinders improvement

A **transfer pathway** is a student's unique educational pathway from community college to a four-year institution. For example, a student earns an associate's degree in science at Piedmont Virginia Community College and transfers to the University of Virginia to complete a bachelor's degree in mechanical engineering.

Data currently collected by VCCS and SCHEV is not sufficient to determine whether community college credits are being counted toward bachelor's degree requirements. This information is needed to determine the effectiveness of transfer policies and could be captured in the student-level data that is maintained by VCCS and SCHEV. One of the challenges of such an effort would be determining whether community college credits earned by students who attain a bachelor's degree are counted toward the student's major, given the tendency of students to change majors. At a minimum, however, SCHEV and VCCS could begin tracking whether community college credits are accepted for credit by four-year institutions.

Other information important to evaluating the state's transfer policies is collected but not consistently analyzed. As a result, it is difficult to determine in which particular transfer pathway (sidebar) the transfer process is least effective for students, the reasons it is not effective, and how it could be improved. SCHEV is consistently tracking completion rates and time taken to complete a degree and prepares an annual report and summaries of this information for each community college and public four-year institution. However, SCHEV does not regularly analyze information about the total number of credits transfer students accumulate while earning their bachelor's degree, or their academic performance after transferring to four-year institutions. The VCCS system office also does not analyze this information, and it is not consistently shared by community colleges and four-year institutions.

Collecting and analyzing more comprehensive information about transfer students would enable the state to better determine the reasons the transfer process does not work well for some students and how it can be improved. Existing data collected by SCHEV could be analyzed in greater detail to determine which transfer pathways correlate to lower rates of student success—lower completion rates, longer completion times, more credits accumulated, and lower grades. This information could be incorporated into SCHEV's annual transfer reports and shared with community colleges and four-year institutions where transfer students are not faring well. Institutions could use the information to identify the factors driving low rates of student success, such

as not choosing a career path and four-year institution early enough, not receiving program credit for courses, or not performing well academically after transfer.

Building SCHEV's capacity to conduct a more comprehensive and detailed analysis of transfer students would be more efficient than employing staff for additional analysis at individual community colleges. SCHEV currently has two full-time staff whose responsibilities include analyzing progress and outcomes data for transfer students. SCHEV would likely need one additional full-time staff to perform a more comprehensive and detailed analysis of transfer records.

RECOMMENDATION 16

The General Assembly may wish to consider amending the Code of Virginia to require that the State Council of Higher Education for Virginia (SCHEV) annually identify the transfer pathways in which transfer students have poorer outcomes, as measured by lower rates of degree completion, longer times for completion, more credits accumulated, and lower course grades. This information should be reported at the end of every academic year, beginning with the 2017-18 academic year, be shared with individual community colleges and public four-year higher education institutions, and be used to identify community college courses that are not routinely accepted for credit by the state's four-year institutions.

4 Affordability of Virginia's Community Colleges

SUMMARY The cost to a student of attending community college in Virginia is well under half that of attending one of the state's four-year institutions and similar to two-year colleges in most other states. VCCS students are less likely to borrow to finance their education, and bachelor's degree recipients who start at VCCS borrow less. Colleges appear to be able to help students access the aid they need through financial aid advising services despite reported limitations. However, the cost of attending community college has increased faster than income levels, and continued increases may diminish future affordability. The State Board for Community Colleges could receive more comprehensive information about affordability to better weigh the impact of tuition and fee increases on affordability.

The General Assembly created Virginia's community college system to provide a more accessible and affordable means of attaining higher education than was traditionally available through four-year higher education institutions. Maintaining the affordability of higher education, including community colleges, is a priority established in Virginia statute, in both the Restructured Higher Education Financial and Administrative Operations Act of 2005 and the Higher Education Opportunity Act of 2011. The affordability of college is an important factor in a student's decision to go to college. Research finds that increases in tuition and fees can deter enrollment in community college. Furthermore, the affordability of postsecondary education is an important factor in whether students ultimately earn a credential.

Tuition and fees at Virginia's community colleges are generally affordable but have been increasing

Considering the price VCCS students ultimately pay to attend community college, VCCS remains an affordable option for postsecondary education. However, the growth of VCCS tuition and fees in recent years has generated concerns that the affordability of VCCS may be threatened.

Virginia's community colleges cost less than its four-year institutions, and costs are comparable to two-year institutions in other states

Community college tuition and fees are substantially less than tuition and fees at public four-year institutions in Virginia. In interviews, higher education stakeholders and VCCS staff commented that Virginia's community colleges remain the most affordable option for postsecondary education in the state, and evidence supports this assertion. In academic year 2016-17, base tuition and fees for a full-time, in-state student at

SCHEV provides annual **data on tuition and fees** for all Virginia higher education institutions. The most recent data available is from 2016-17.

However, in order to compare tuition and fees across states and provide context for changes in VCCS tuition and fees, JLARC staff relied on data from the federal government. The most recent data available is from 2015-16.

A college's **net price** is the actual cost to a student of attending. Net price includes the cost of tuition and fees, books and supplies, transportation, and living expenses minus grants and scholarships for the average student.

College-level data on net price has been reported by the federal government since 2009-10. The most recent data available is from 2014-15.

a community college (\$4,388) were 38 percent of the tuition and fees at the median public four-year institution in Virginia (\$11,570) (sidebar). Tuition and fees at four-year institutions ranged from \$8,472 at Virginia State University to \$21,234 at the College of William and Mary. Community colleges may also charge additional fees and tuition add-ons, which can add \$60 to \$900 per year for a full-time student.

The actual cost to a student of attending community college—referred to as “net price”—for an academic year compares favorably to key benchmarks (sidebar). In 2014-15, the average net price of Virginia's community colleges, around \$7,200, was 41 percent of the average net price of Virginia's four-year institutions. The highest net price among Virginia community colleges, around \$9,500, was roughly \$2,000 less than the net price of the lowest-cost public four-year institution. At all levels of family income, the average net price of Virginia's community colleges remains substantially lower than the average net price of Virginia's four-year institutions (Figure 4-1). The VCCS net price was roughly comparable to public two-year institutions nationwide and around \$500 (seven percent) higher than the net price in the Southeast. At income levels of \$0 to \$75,000, the VCCS net price was similar or slightly lower than public two-year institutions in the Southeast and nationwide. At higher income levels, the VCCS net price was similar or slightly higher. (See Appendix E for information about how net price varies across community colleges and income levels.)

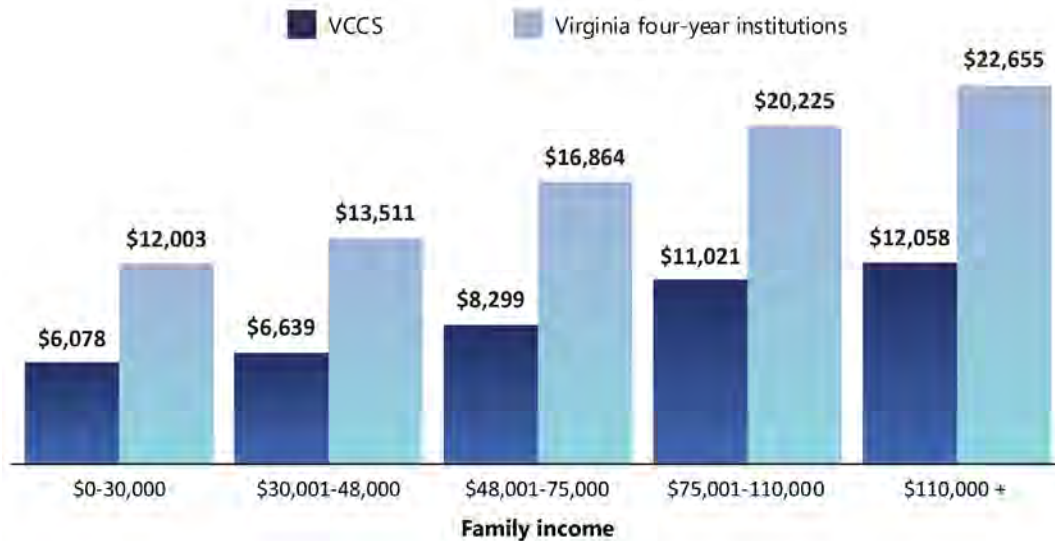
Continued increases in tuition may diminish affordability of Virginia's community colleges

Over the past decade, community college tuition and fees have increased substantially, and continued increases may diminish future affordability. For instance, average VCCS tuition and fees have increased from six percent of statewide per capita disposable income in 2006-07 to nearly 11 percent in 2015-16. Base VCCS tuition and fees have increased every year since 2002-03 and over the past 10 years tuition increases have averaged 6.9 percent annually. The highest annual tuition increase was in 2009-10, when VCCS increased tuition twice, for a cumulative increase of 18.1 percent. Since 2012, tuition increases have tended to be smaller, but each increase has been applied to a higher level of tuition.

VCCS tuition and fees have increased faster than the tuition and fees of Virginia's four-year institutions. From 2006-07 to 2015-16, VCCS tuition and fees increased 90 percent, adjusted for inflation—faster than Virginia's four-year institutions (61 percent) (Figure 4-2). Over the same time period, increases in tuition and fees at Virginia's four-year institutions ranged from 32 percent (Virginia State University) to 99 percent (College of William and Mary).

FIGURE 4-1

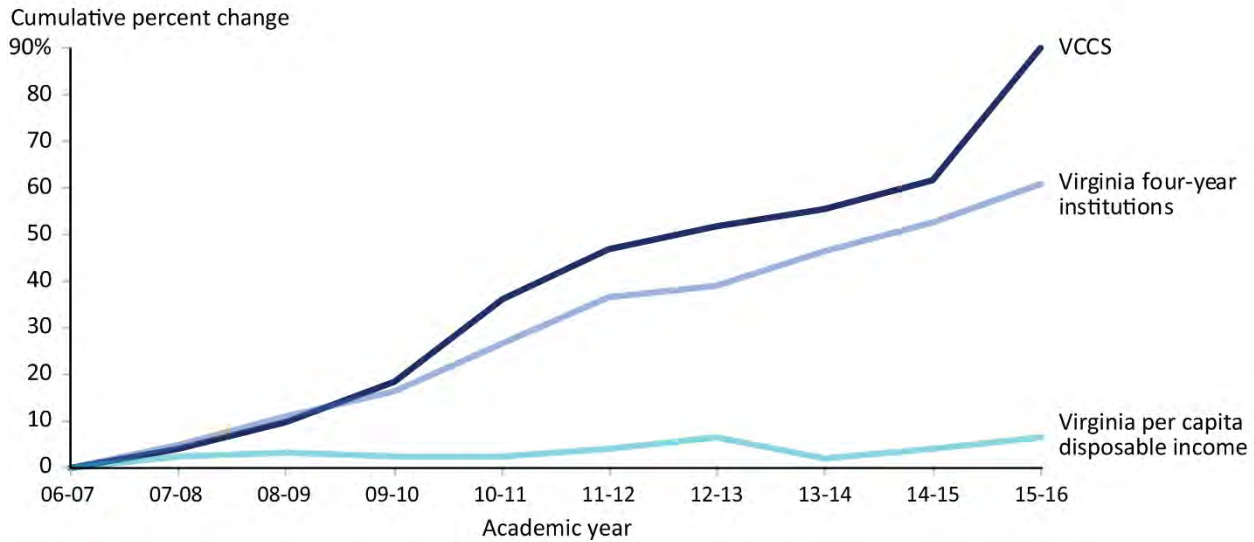
Across income groups, the net price of Virginia's community colleges is half the net price of four-year institutions



SOURCE: JLARC analysis of 2014-15 data from the U.S. Department of Education's College Scorecard.
 NOTE: Not adjusted for inflation. Data reflects average net price at Virginia's community colleges and public four-year institutions for full-time, first-time, degree/certificate-seeking students who receive federal Title IV financial aid and who pay in-state tuition. Averages are weighted by the number of students who are full-time, first-time, degree/certificate-seeking, and receive Title IV aid. Net price increases as income increases because lower-income students receive more grant aid. Excludes Eastern Virginia Medical School and Richard Bland College.

FIGURE 4-2

Community college tuition and fees increased faster than at four-year institutions and disposable income



SOURCE: JLARC analysis of published in-state tuition data from the Integrated Postsecondary Education Data System; St. Louis Federal Reserve GDP Deflator; statewide per capita disposable income data from the U.S. Bureau of Economic Analysis. Excludes Eastern Virginia Medical School and Richard Bland College.
 NOTE: Data is in 2016 dollars; reflects average in-state tuition and fees in each sector, weighted by 12-month FTE enrollment, for each year.

VCCS tuition and fees have increased faster than the tuition and fees of public two-year institutions in other states. VCCS tuition and fees increased faster than the tuition and fees of two-year institutions nationwide (26 percent) and in the Southeast (43 percent). Among the 50 states, the growth rate of VCCS tuition and fees was the second highest.

The net price of Virginia's community colleges has also increased. The net price has grown to a lesser extent than tuition and fees, but still at a faster rate than statewide per capita disposable income. Between 2009-10 and 2014-15, the net price paid by community college students increased 15 percent, adjusted for inflation—faster than growth at two-year institutions in the Southeast (one percent) and nationwide (two percent decline) and similar to Virginia's four-year institutions (14 percent).

Without parallel increases in financial aid, continuing increases in tuition, fees, and the other costs of attending community college will cause the actual cost students pay to attend community college to continue to rise. This may disproportionately impact low-income students because the net price for these students grew faster between 2009-10 and 2014-15 than it did for all VCCS students. VCCS staff have expressed concern that an increasing proportion of the federal Pell Grant (sidebar) pays for tuition and fees rather than books and living expenses. Between 2006-07 and 2015-16, the maximum Pell Grant award increased 25 percent, substantially less than the 90 percent increase in VCCS tuition and fees during the same time period. In 2015-16, the maximum Pell Grant award was nearly \$5,800, or 121 percent of VCCS tuition and fees, but in 2006-07, the maximum award was 184 percent of tuition and fees. If financial aid awards such as the Pell Grant continue to grow at a slower pace than VCCS tuition and fees, students may need to work more, reduce credits, or borrow more.

A Pell Grant is a federal grant awarded on the basis of financial need. In the 2015-16 academic year, nearly 40 percent of VCCS students received a Pell Grant, with an average award of around \$3,200.

State Board should receive more information about impact of tuition increases on affordability

Authority to set tuition and fees for Virginia's community colleges is established in statute (§ 23.1-2905) and vested with the State Board for Community Colleges, which reviews and approves tuition and fee rates every year.

The State Board for Community Colleges has authority to set tuition and mandatory fees for VCCS (sidebar). In the past five years, the use of tuition increases has been divided between “must-fund” items, such as salary increases mandated by the General Assembly and health care costs, and more discretionary items such as funding additional salary increases, increasing full-time faculty, implementing student success initiatives, and other smaller initiatives.

Ensuring that community college remains affordable in Virginia is a critical responsibility of the state board, but the tuition-setting process is not formalized in policy, and VCCS does not have specific metrics or a process by which to judge community college affordability, particularly in relation to measures of income. Through the Appropriation Act, the General Assembly directs Virginia's higher education institutions, including VCCS, to “take into consideration the impact of escalating college costs for Virginia students and families” when setting tuition. In addition, VCCS written policy expresses the system's intention to set tuition at levels that “provide for economic accessibility.”

To ensure that community college remains affordable, the state board needs to consistently receive information about how affordable tuition and fees are for students, and how proposed increases will impact affordability. VCCS staff provide state board members with information about how tuition and fees compare to the average public four-year institution in Virginia and to community colleges in other states, and tuition and fee levels relative to statewide disposable income. Additional information could provide further insight into whether students can afford to attend community college, given the total cost, financial aid, and the income levels of VCCS students.

Other states present more comprehensive and detailed information to their community college boards that gives greater insight into the affordability of tuition and fees and how an increase may impact enrollment. In some cases, this information includes the availability of state and federal financial aid. In Colorado, staff provide the board information about trends in state funding for financial aid. Both Colorado and Minnesota include information about how the maximum award from the federal Pell Grant compares to the proposed tuition increase. In other cases, states explain to their boards how the net price of community college will change after an increase in tuition and fees. For example, in Minnesota, the board receives information about how the net price of community college will change for different income groups after taking into account tuition increases and changes in state and federal financial aid programs.

VCCS should add to its policy manual a formal process for considering proposed tuition and fee increases, which should include standard information on affordability to be presented to the state board. At a minimum, staff should provide the following information:

- tuition and fees relative to the income level in each college's service area (sidebar);
- net price for each college relative to the income level in each college's service area; and
- whether federal, state, and institutional financial aid—including the Pell Grant, the Virginia Commonwealth Award, the Virginia Guaranteed Assistance Program, and various aid programs provided by the colleges—have kept pace with increases in tuition and fees.

This additional information would align VCCS with practices in other states and with Virginia statute and help the state board and system office consider several aspects of affordability. Higher education institutions are encouraged to conduct “a periodic assessment [to] determine the impact of tuition and fee levels net of financial aid on applications, enrollment, and student indebtedness” (§ 23.1-1002). The state board could use this information to more fully consider whether an increase in tuition and fees would make it more difficult for individuals to attend community college, and whether such an increase would reduce rates of completion by making it more difficult for students to enroll full-time.

In order to better understand VCCS's tuition and fee setting process, JLARC staff reviewed VCCS policy and state board bylaws and interviewed system office staff. In addition, JLARC staff attended board meetings when tuition and fee rates were discussed, reviewed documents prepared for the board meetings from 2013 through 2017, and reviewed policies and practices in other states. (See Appendix B for research methods.)

The policy manual for the Virginia Community College System outlines a **service area** for each college. These areas largely follow city or county borders, and delineate where a college can market its programs and the population it is expected to serve.

Future increases in tuition and fees may be necessary even if more comprehensive information about affordability is presented to the state board, and this information would probably not have changed decisions about past increases. However, better information would enable the state board to determine how affordable community college is in Virginia, and may help identify financial aid strategies to further assist students for whom affordability is a challenge.

RECOMMENDATION 17

The Virginia Community College System should modify its policy manual to specify the types of information staff must present to the State Board for Community Colleges when the board is evaluating proposed tuition and fees increases. At a minimum, the manual should specify college-level metrics, such as tuition and fees and net price relative to income in each college's service area, and information about whether federal, state, and institutional financial aid have kept pace with increases in tuition and fees.

Community college students accrue less debt than students at four-year institutions

In addition to income, savings, grants, scholarships, and tax benefits, students can finance their postsecondary education with loans from the federal government or private sources. Student debt may be beneficial if it allows students to access and earn a postsecondary education that can increase their lifetime earnings. In Virginia, a majority of community college students do not borrow, and substantially fewer community college students take on debt, as compared to students at Virginia's four-year institutions.

Majority of VCCS students do not borrow to finance their education

The vast majority of community college students in Virginia do not borrow to finance their education. According to analysis of student-level data over multiple years (sidebar), 31 percent of VCCS students borrow to finance their education, substantially lower than the 61 percent of students at Virginia's four-year institutions who borrow.

Borrowing among community college students varied depending on the credential the student was pursuing, with students in longer academic programs more likely to have borrowed (Figure 4-3). Among the students who did borrow and earned a credential, median debt varied from about \$7,000 for students who earned a short-term certificate to nearly \$23,300 for students who eventually earned a bachelor's degree.

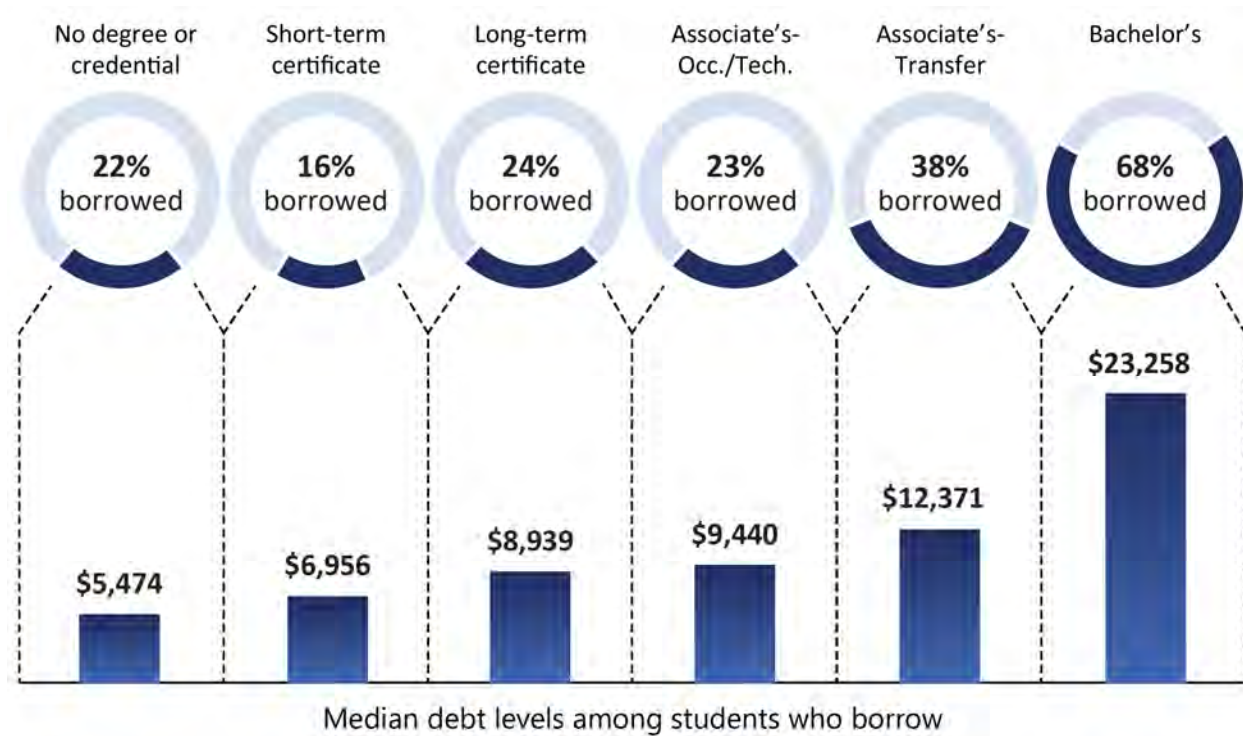
The median debt for students who borrowed and did not earn a degree or credential was \$5,500. Some students who do not earn a postsecondary credential may be able to use courses taken at a community college to secure employment or to earn higher wages. Therefore, accruing student debt may still be beneficial. However, students who borrow without earning a postsecondary credential are at greater risk of increasing their indebtedness without increasing their ability to repay that debt.

JLARC's cohort analysis of VCCS data offers insight on student debt.

Data combines student cohorts from 2008-09 to 2010-11 and follow students through 2015-16. Analysis includes students who borrowed at least once, are 17-19 years old, are entering community college for the first time, are pursuing a degree or credential, and are taking at least 12 credits in their first year.

(See Appendix B for research methods.)

FIGURE 4-3
Borrowing and debt levels among community college students vary by program type



SOURCE: JLARC cohort analysis of SCHEV data.

NOTE: Percentages are the proportion of all students in each program type who borrow. Dollar amounts are median debt levels within each program type, among students who borrow. Short-term certificates are credentials that can be earned in less than one year. Long-term certificates can be earned in one to two years. Associate's degrees can be earned in two years. Bachelor's degrees can be earned in four years. Debt includes unsubsidized and subsidized federal loans, PLUS loans, Perkins loans, Title VII loans, institutional loans, loans from endowments and gifts, supplemental loans for students, and private loans.

Transfer students borrow less to earn a bachelor's degree than students who begin at a four-year institution

Most students who start in community college and earn a bachelor's degree borrow less than students who start in a four-year institution. Because borrowing varies by household income, the most appropriate way to compare debt levels is to compare students within the same income category (sidebar). For example, the median debt of students with an expected family contribution (EFC) of zero was \$13,900 for students who began at a community college and \$26,400 for students who began at a four-year institution. The primary reason for lower debt is the lower cost of attendance at community colleges, but there may be other factors. For example, some community colleges do not offer students the option of taking out federal loans.

In order to accurately compare students who start at community colleges and students who start at four-year institutions, it is necessary to control for a student's ability to independently pay for postsecondary education.

Expected family contribution (EFC) is the federal estimate of what a family is expected to independently pay for postsecondary education. A lower EFC reflects fewer resources to pay for postsecondary education.

Repayment rates of VCCS students are similar to repayment rates of community college students in other states

VCCS students with federal loans have been less successful at repaying their loans compared to students at Virginia's four-year institutions, but they have been just as successful as students at two-year institutions in other states. VCCS repayment rates over any time frame were lower compared to repayment rates at Virginia's four-year institutions over the last five years of available data (sidebar). For example, in 2014-15, the average three-year repayment rate for VCCS was 38 percent compared to 65 percent for four-year institutions. This is consistent with national research on loan repayment rates.

However, average one-year, three-year, five-year, and seven-year repayment rates for VCCS compared favorably to the repayment rates of two-year institutions in the Southeast. In 2014-15, the average three-year repayment rate for VCCS was 38 percent, compared to 32 percent in the Southeast and 38 percent nationwide.

Colleges are providing key financial aid services

Financial aid advising is intended to provide students with information about the availability of financial aid and eligibility requirements and assist them with completing financial aid applications. Financial aid advising may also involve educating students on budgeting and financial literacy. Colleges can provide financial aid advising in a variety of ways, including in person, by phone, and electronically through emails, text messages, and digital material.

Financial aid advising is critical to ensure that students can attend community college and earn a postsecondary credential. Students may miss out on financial aid for many reasons, including believing that they are ineligible, lacking information on how to apply, or believing that applying is too difficult or complicated. Nationwide, as many as 14 percent of students in public two-year institutions would qualify for a Pell Grant—including nearly two-thirds that would qualify for the full grant award—but do not apply for financial aid. Colleges that provide effective advising can mitigate this problem and help students receive the financial aid for which they are eligible.

Despite reported limitations, colleges are generally able to provide financial aid advising

Virginia's community colleges are generally providing the financial aid services students need, but staff at several colleges reported challenges to providing these services. Among the colleges responding to JLARC's survey of community colleges (sidebar), all offer drop-in advising and on-campus financial aid workshops to students, and all but one offer financial aid workshops in local high schools. However, nine colleges reported insufficient numbers of financial aid advisers, making it difficult to provide the financial aid advising their students need. Just six colleges reported no difficulty in providing these services. Community college financial aid staff in other states have also reported insufficient levels of staffing.

The **federal loan repayment rate** is measured as the share of former students with federal loans who are able to pay down at least \$1 of the principal balance within one, three, five, or seven years upon leaving the institution.

JLARC staff surveyed **executive-level staff** at all 23 community colleges in Virginia. This included presidents; vice presidents of academics, workforce, IT, and finance; and directors of financial aid. Financial aid directors from 17 colleges responded to the survey, a response rate of 74 percent.

(See Appendix B for research methods.)

The difficulties reported by VCCS staff do not appear to have constrained their ability to provide the financial aid advising services students need. Colleges have not had to limit the availability of financial aid advising services due to insufficient staffing. Among the nine colleges that reported not having a sufficient number of financial aid advisers, none reported having to limit the length of student meetings or the amount of follow-up after meetings as a result. Students also report being satisfied with the financial aid advising they receive, according to college surveys of VCCS students (sidebar).

VCCS has taken steps to advise students about financial aid without hiring additional staff

VCCS and individual community colleges are taking steps to provide financial aid information more efficiently and ensure that students can meet with financial aid advisers when necessary. Community colleges are providing financial aid information in numerous ways to ensure it reaches students. During interviews, colleges reported that they often use multiple media to convey information to students, such as online handbooks, websites, and televisions around campus. This is a recommended practice in the research literature because it provides an efficient way to deliver information about financial aid to students without additional staff. VCCS has integrated information about financial aid and financial literacy into student development courses, and colleges often include information in new student orientations. Some colleges use online providers to supply information about financial aid and financial literacy. In addition, some academic advisers, particularly student success coaches, are trained to provide basic guidance on financial aid.

Two recent initiatives were implemented to alleviate the financial aid workload at the colleges so that financial aid advisers can focus on personalized, face-to-face advising of students. First, nine colleges participate in back-office financial aid processing services through a consortium operated by Tidewater Community College. Back-office processing and managing a college's compliance with federal and state financial aid regulations are significant responsibilities for financial aid staff which can take considerable time away from student outreach. Colleges in this consortium may be able to spend more time with students because Tidewater Community College handles some of these responsibilities.

In 2014, VCCS contracted with a third party to provide a call center that operates 24 hours a day, seven days a week, for students with questions about financial aid. The call center may be particularly convenient for students who have difficulty meeting with a financial aid adviser around other commitments. College staff have noted some problems with call center services: some students dislike the impersonal nature of the call center, and the call center occasionally provides incorrect information. Still, financial aid staff seem to be satisfied overall. Thirteen college financial aid directors indicated that they are at least somewhat satisfied with the call center and 10 believe that the call center helps them to better meet student needs.

Virginia's community colleges occasionally conduct **student surveys** about academics and student services.

Survey content and frequency vary by college, but each of the 23 colleges uses some type of survey to gain insight into student satisfaction with support services.

New **financial literacy objectives** for middle and high school students in Virginia were recently codified by the General Assembly (SB 1245, 2017). The new objectives include information about higher education, financial aid, and student debt.

5 Structure of the Virginia Community College System

SUMMARY The VCCS system office provides generally effective support and leadership for the colleges, but could provide more timely and accurate assistance to colleges. The system office spends slightly less on internal operations today than roughly a decade ago, but should examine whether it could make more efficient use of its staff. In recent years, the system office has implemented initiatives focused on greater centralization of uniform duties, which has the potential to reduce system-wide costs and allow colleges to focus more on students and student-facing activities. The system has fewer colleges compared to most other states, and closing or consolidating small colleges and campuses would reduce access to community college programs and is not warranted at this time. Still, VCCS lacks a formal process for considering the closure or consolidation of campuses, which could be necessary if enrollment declines continue, particularly for the system’s smallest colleges.

Today, the numerous operational challenges confronting the Virginia Community College System (VCCS) underscore the importance of having a structure that is as effective and efficient as possible. Operational challenges include declining enrollment and funding, an increased emphasis on student achievement within an open admissions model, and a mission that has been significantly expanded to include workforce training and career and technical education. This study examined three key aspects of the structure of VCCS: the effectiveness of the VCCS system office, the number and locations of college campuses, and the extent to which the system has maximized efficiencies by centralizing or sharing functions and resources.

System office generally supports colleges effectively, but communication could be improved

A well-functioning system office is critical to the overall effectiveness and efficiency of the system as a whole. The system office coordinates the functioning of VCCS as a system, with consistent system-wide policies, goals, and initiatives, rather than as 23 autonomous colleges, with varying missions, standards, and objectives. The system office develops policies, goals, and initiatives intended to be implemented as uniformly as possible across the colleges, and supports the colleges with implementation. The system office distributes the bulk of the system’s state and federal funding to the colleges, and acts on behalf of the colleges in responding to and complying with state and federal financial and legal requirements and policies.

The VCCS system office generally provides effective support and strategic leadership for the 23 community colleges, but some college executive staff desire improvements.

JLARC staff surveyed executive-level staff at all 23 community colleges in Virginia. Survey respondents included 119 executive staff from all 23 colleges, a response rate of 88 percent. Respondents included all 23 college presidents. (See Appendix B for research methods.)

Among college executive staff responding to JLARC’s survey, 44 percent report being less than fully satisfied with the overall leadership provided by the system office, although a majority of these staff were at least somewhat satisfied. Additionally, in interviews and survey responses, staff at 12 colleges expressed concern about the system office’s handling of recent system-wide initiatives and skepticism about the potential advantages of the centralization of certain functions that is taking place within VCCS. College staff did not identify instances in which problems with the system office had negative impacts on core operations.

College staff are frustrated with system office staff’s inconsistent knowledge and response times

JLARC surveyed all staff at the VCCS system office. Survey respondents included 195 staff, a response rate of 82 percent. (See Appendix B for research methods.)

One measure of the system office’s effectiveness is its ability to develop clear and appropriate goals for its internal operations and the system as a whole. By this measure, the system office appears to be generally effective, although survey results suggest the need for improvements, particularly with regard to setting clear direction for the colleges. Internally, nearly all system office staff have a clear understanding of their day-to-day responsibilities (90 percent) and the responsibilities of the system office within the broader community college system (88 percent). However, fewer college executive staff (63 percent) who were asked agreed that the system office sets clear goals for the colleges.

“*There [are] sometimes too many layers or things are not well thought out in advance so there is no real answer. Often, real answers take a long time. Answers are often inappropriate for larger colleges.*”

— Community college executive staff

While most executive-level staff at the 23 community colleges reported being satisfied with the assistance they receive from the system office, some were not fully satisfied. Nearly 30 percent of executive staff with the colleges (representing 17 colleges) and 39 percent of college presidents reported being less than fully satisfied with assistance from the system office. When executive staff at the colleges were not fully satisfied with system office assistance, it was largely due to frustration with obtaining answers to their questions, rather than problems that had a negative impact on colleges’ daily operations or students. Staff were primarily frustrated with the system office’s slow response time and limited ability to answer questions. College-level executive staff also perceive that the system office is disconnected from the day-to-day operations of community colleges.

System office staff confirmed that the system office is not always well-connected to the colleges. Approximately 30 percent of system office staff reported difficulty responding to requests from colleges. System office staff primarily mentioned either the high volume of requests they receive or difficulty finding information as challenges, potentially exacerbating the frustration of college staff.

College staff desire improved management of system-wide initiatives

Over the past six years the system office has implemented more than 20 new system-wide initiatives, including several designed to streamline system-wide operations and allow college staff more time to focus on “student-facing” activities. (See Appendix F for information about system-wide initiatives developed by the system office.)

Two mandatory initiatives centralized “back-office” functions. The first such initiative is a financial aid call center supported by a third party, implemented system-wide in 2015. The call center operates 24 hours a day, seven days a week, to address questions about student accounts and financial aid. The goal of this initiative was to provide a central, standardized resource for students, and allow college staff time to focus on their student-facing duties. Colleges pay for the call center on a per-FTE basis. Among executive staff at the colleges who were dissatisfied with the services provided, the primary reason for dissatisfaction was the cost—staff believe that colleges could provide a similar service at a lower cost, and that not enough students take advantage of the service to justify the cost.

The second centralization initiative is a Shared Services Center, which is still being implemented and will centralize most back office functions of the colleges and system office, including accounts payable; collections; time, leave, and absence management; travel; and payroll. In the business case for the Shared Services Center, consultants estimate that it will save the system about \$4 million annually when fully implemented and \$27 million long-term, compared to the current localized structure. The final funding structure for this initiative is still being developed and the amount of savings, as well as how it will be reinvested in the system, has not been determined. About 32 percent of college staff who were asked about the transition indicated that they were dissatisfied with the way the system office has managed the transition to the Shared Services Center. Many expressed concern that the initiative was not developed in a transparent manner with sufficient communication from the system office or sufficient opportunities for colleges to provide input.

System office staff are not always knowledgeable about new initiatives

System office staff do not always have sufficient information to respond to questions from community college staff about new policies or initiatives. Several system office staff explained that they did not know the answers and did not want to create policy unintentionally, or did not know whom to contact at the system office to find the correct information.

It is important for system office staff impacted by a new initiative to fully understand how the initiative works, the role their department will play, and how they can support the colleges through the implementation stage. However, one-third of system office staff who are involved in some way in new system-wide initiatives reported that they were less than adequately informed about these initiatives and did not understand the role of their department in the implementation. This could be remedied, at least in part, by improving communication protocols between system office divisions. For example, 29 percent of system office supervisors noted that improved communication within and between divisions would allow their division to improve its function and better serve the colleges.

“*There is sometimes an information gap between the system office and the colleges. I assume faculty at a college are familiar with a system-wide initiative, only to find out that they haven't really heard of it.*

Vice-versa, too—I am sometimes unfamiliar with what a college faculty member is talking about.”

— System office staff

“The system office needs to do a better job of considering all resources (staff) and funding sources when considering new initiatives . . . to ensure that all resources that will be impacted are taken into account.

More . . . work should be done to look at existing services and systems to avoid duplication.”

— System office staff

JLARC staff interviewed community college staff at 12 VCCS colleges. JLARC staff visited nine of the 12 community colleges. Executive level staff with the colleges were asked about various topics, including the challenges students face, student support services provided by the colleges, and college efforts to improve student success levels. (See Appendix B.)

Pass-through spending typically includes spending on capital and construction costs, and most federal funds. These funds are passed through the system office onto the colleges for specific programs.

New initiatives create resource challenges for colleges

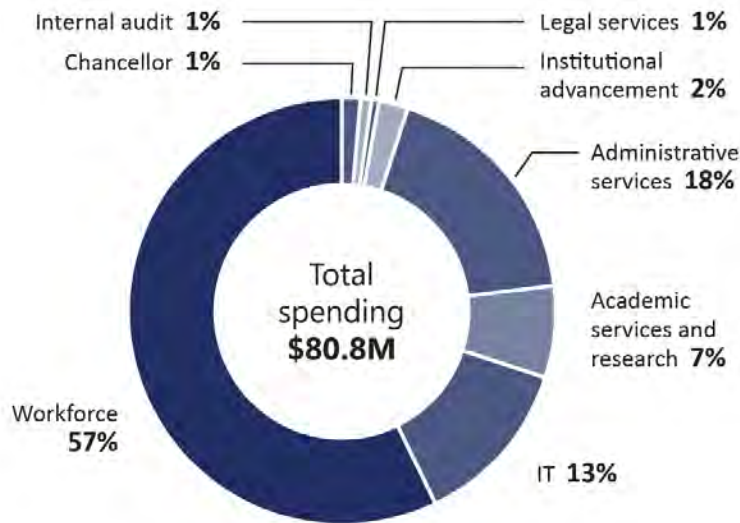
Several of the system-wide initiatives implemented by the system office in recent years appear to have created resource challenges for community colleges. Implementing new initiatives—even when they will be beneficial to colleges, the system as a whole, and students—requires time and resources, and may take staff away from their typical duties. In response to the JLARC survey, executive staff at 12 colleges, including the presidents at nine colleges, mentioned “initiative fatigue” as a concern for their college and its operations. In interviews and survey comments, staff at 14 colleges expressed frustration with the number and scale of initiatives implemented recently. While recent system-wide initiatives have increased the workload of executive staff at the colleges, they do not appear to have hindered the daily operations of colleges or their ability to meet student needs.

In most cases, colleges have absorbed the cost of implementing new initiatives without additional funding. Implementation of new system-wide initiatives has coincided with funding and staffing reductions at Virginia’s community colleges. Colleges in VCCS are already lean—18 of the 23 VCCS colleges have fewer staff per 100 student FTEs than the average at peer colleges in the Southern Regional Education Board. For some initiatives, such as the Shared Services Center, funding is provided for implementation, but the colleges must absorb the ongoing costs.

VCCS system office spending on its own operations has decreased slightly

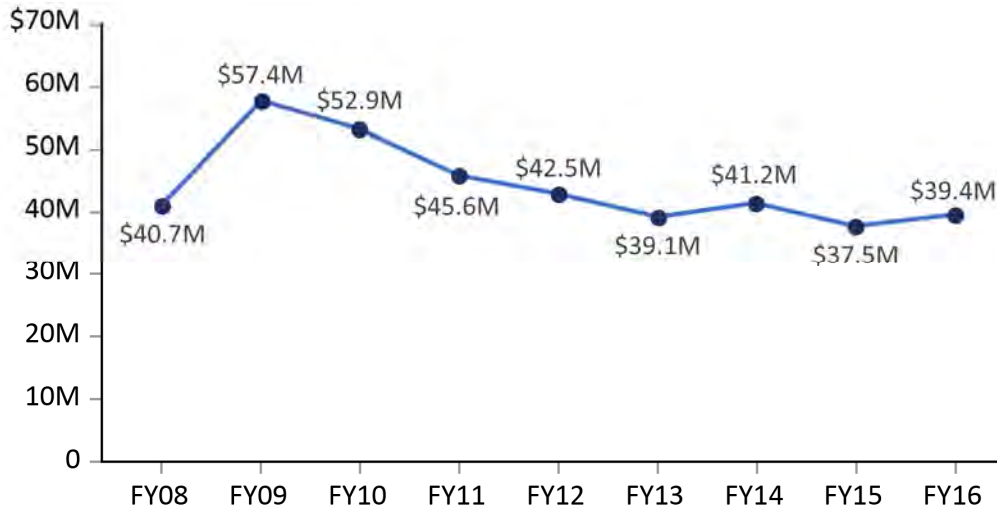
The VCCS system office spent more than \$80 million in FY16, with a majority of this spending on workforce development (Figure 5-1). About 51 percent of total system office spending is on its own operations. The remaining 49 percent is considered “pass-through” spending, distributed by the system office to the colleges (sidebar). Spending by the system office on its internal operations has been relatively flat in recent years (Figure 5-2). Spending on internal operations has decreased three percent since FY08, from \$40.7 million to \$39.4 million in FY16, adjusted for inflation. A 54 percent (\$12.2 million) decrease in IT spending, primarily achieved by expensing system-wide software programs to the colleges, was responsible for nearly all the decrease, and offset spending increases in six other divisions. These increases ranged from one percent in the chancellor’s office to over 200 percent in workforce development, with a median increase of 34 percent. Increases were primarily for salaries, wages, and benefits costs. With workforce development in particular, operating costs increased when the system office absorbed additional responsibilities.

FIGURE 5-1
System office spent \$81 million, primarily on workforce development (FY16)



SOURCE: JLARC analysis of Virginia Community College System (VCCS) system office spending data, FY16.

FIGURE 5-2
System office spending on internal operations has declined three percent (FY08-FY16)



SOURCE: JLARC analysis of VCCS system office spending data, FY08 through FY16.
 NOTE: Adjusted for inflation. Excludes pass-through expenditures. Spending increase in FY09 due to new federal funding for workforce development duties.

The system office retains a relatively limited percentage of the general funds it shares with the community colleges. Since FY08, the system office has retained an average of 8.7 percent of these funds, and between FY08 and FY16, the percentage actually declined by about one percentage point. Since FY13, the percentage of funds retained by the system office has been below the 10-year average. The decrease in the percentage retained by the system office occurred as higher education operation funding levels declined.

An analysis of staff salaries showed system office salaries to generally be comparable to similar positions at other state agencies. However, six jobs, employing 17 system office staff, were found to pay salaries that were at least \$10,000 higher than the median salaries for the same jobs at other state agencies. These are all relatively high-paying jobs requiring specialized skills.

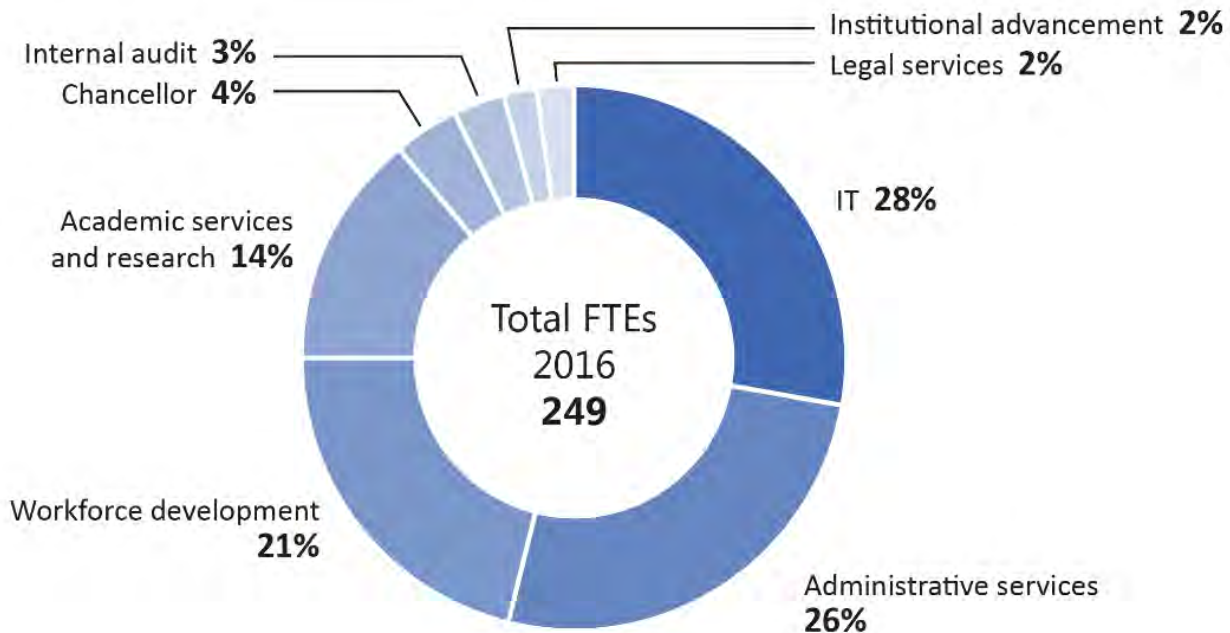
In recent years, the system office has used numerous consultants for various initiatives, and this has most recently been driven by the development of the Shared Services Center. Over a five-year period, beginning in FY13, the system office reported hiring 11 consultants at a cost of \$4.9 million to assist with various initiatives, with a median annual expenditure of about \$900,000. The system office spent nearly half of these funds on consultant assistance with the design and development of the Shared Services Center, which is a complex, multi-phased, and long-term project. Consultant costs were primarily funded with general funds, which accounted for 84 percent of the total.

Over that same time period, of 31 system-wide initiatives implemented or under development, the system office reported that 19 did not involve the use of consultants. The system office relied exclusively on its own staff to manage key initiatives, including the College Success Coach program, the development of meta-majors, and the redesign of its remedial education courses and policies.

System office has added employees and should assess efficiency of staffing

In 2016, the system office had 249 FTEs divided among eight divisions, which vary greatly in size (Figure 5-3). Staffing at the system office increased 36.4 percent, or about 66 FTEs, between 2008 and 2016. Over half (54.5 percent) of these new FTEs are in workforce development, and of the 36 FTEs added there, 20 are paid with federal funds, and can largely be attributed to the additional federal Workforce Investment Opportunity Act responsibilities the system office received in 2008. The remaining new workforce staff are primarily grant funded (six) or a combination of higher education operating funds and grant funds (eight), and two are funded through the Virginia Foundation for Community College Education.

FIGURE 5-3
Most staff are in IT, administrative services, workforce development, and academic services



SOURCE: JLARC analysis of FY16 employee data and staff FTE from VCCS.

New duties and initiatives the system office takes on have accounted for 28.5 of the remaining 30 FTEs added to the system office. General funds cover 11.5 FTEs, while at least seven are funded by the colleges, four are covered by capital costs, three are grant funded, and three are funded through various non-state funding sources. These staff are engaged in efforts such as the student success center or new student tracking software, which aim to improve the student experience and reduce the burden on colleges. The remaining 1.5 FTEs added between 2008 and 2016 are not related to new duties.

Despite increases in staffing, over half of all supervisors at the system office (58 percent) believe they have too few staff. This includes supervisors in most divisions, including the largest. Furthermore, 55 percent of system office staff report working overtime on a weekly basis.

Overall, the system office has an average of 3.7 staff per supervisor; this ratio is lower than the comparable ratio for administrative functions at Virginia’s four-year institutions. (See *Support Costs and Staffing at Virginia’s Higher Education Institutions*, JLARC 2014.) It is also lower than a benchmark developed by a consultant for the University of California, Berkeley, recommending that supervisors have six to seven direct reports. Moreover, approximately 40 percent of the system office employees with a “supervisor” designation have only one employee assigned to them. These ratios, coupled with the apparent prevalence of overtime hours, suggest that the system office should evaluate the efficiency of its staffing structure, including whether additional staff are needed in some divisions and whether some supervisory positions are necessary.

To calculate **employee-to-supervisor ratios**, JLARC staff identified supervisory relationships in employee-level data from the Department of Human Resource Management (2016).

RECOMMENDATION 18

The system office of the Virginia Community College System should assess the adequacy of staffing in those divisions that most directly affect colleges' operations, including the divisions of academic services and research, and administrative services. The review should also determine whether duties could be more efficiently distributed between supervisors and the staff they supervise, including whether some supervisory positions could be reclassified as non-supervisory to distribute workload more efficiently.

VCCS has a relatively efficient physical structure but should periodically examine viability of smallest colleges

The efficiency of a community college system can be measured by (1) the number of colleges per capita for the population over age 18 and (2) the number of colleges with enrollments below the national median. In general, more efficient systems will have more people per college and fewer colleges with enrollments below the national median.

Student enrollment provides important context for evaluating VCCS's efficiency. Over the past seven years, since peak enrollment in 2011-2012, system-wide student FTEs have declined by a total of 14 percent. Student FTEs have declined at all 23 community colleges, with a median decline of 15 percent. Declining enrollment has been most pronounced at Eastern Shore Community College (a 35 percent decline), Southside Virginia Community College (30 percent) and Patrick Henry Community College (28 percent). During that same time period, total revenue has declined at 10 of the 23 community colleges, including the three smallest (Dabney S. Lancaster, Paul D. Camp, and Eastern Shore). (See Appendix G for enrollment trends at community college campuses, off-campus sites, and online learning programs.)

VCCS is efficient compared to systems in other states

VCCS has a relatively efficient structure compared to community college systems in other states. For example:

- Virginia has fewer community colleges per capita than most other states.
- Virginia ranks 20th nationwide for the number of people over 18 per college.
- Just under half (43 percent) of VCCS colleges have enrollments below the national median of 2,232 student FTEs. However, nearly all colleges with enrollments below the national median for student FTEs are located in areas of low population density, where the very high cost per student should be considered along with the need for access to higher education.
- 29 other states have a higher percentage of colleges with relatively low enrollments.

Virginia’s community colleges also exhibit spending and staffing levels that are lower than levels in other states. For example:

- Virginia’s community colleges spent \$11,872 per student FTE in academic year 2015, compared to \$14,631 per FTE for colleges in Southern Regional Education Board states and \$15,364 per FTE nationwide.
- Virginia’s community colleges had an average of 11.1 FTE staff per 100 student FTEs, below the average of 13.4 in the southeastern states and 12.1 among colleges nationwide.

VCCS campus locations are logical and ensure access to courses and training, but viability of smallest campuses should be examined

VCCS has enough colleges and campuses to adequately serve the state’s population. The locations of the 40 VCCS campuses generally ensure that Virginians are within 30 miles of a community college (sidebar) (Figure 5-4). There are only a few parts of the state where residents are not within 30 miles of a community college campus, and most of these are rural parts of Virginia. In fact, there are many areas of the state in which residents are within 30 miles of more than one community college (Figure 5-5). This overlap is reasonable in areas of high population density—Northern Virginia, Central Virginia, and Hampton Roads—where more than one community college campus may be needed to ensure adequate access to programs and services. However, in areas of low population density, significant overlap could indicate an unnecessary duplication of programs and services, and these locations were examined.

There do not appear to be any community colleges or individual campuses that should be closed or consolidated at the present time. However, closing or consolidating colleges or campuses should be examined periodically to ensure that VCCS maintains a relatively efficient structure. In general, the advantages and disadvantages of closure or consolidation should be carefully considered for any colleges that meet the following three criteria:

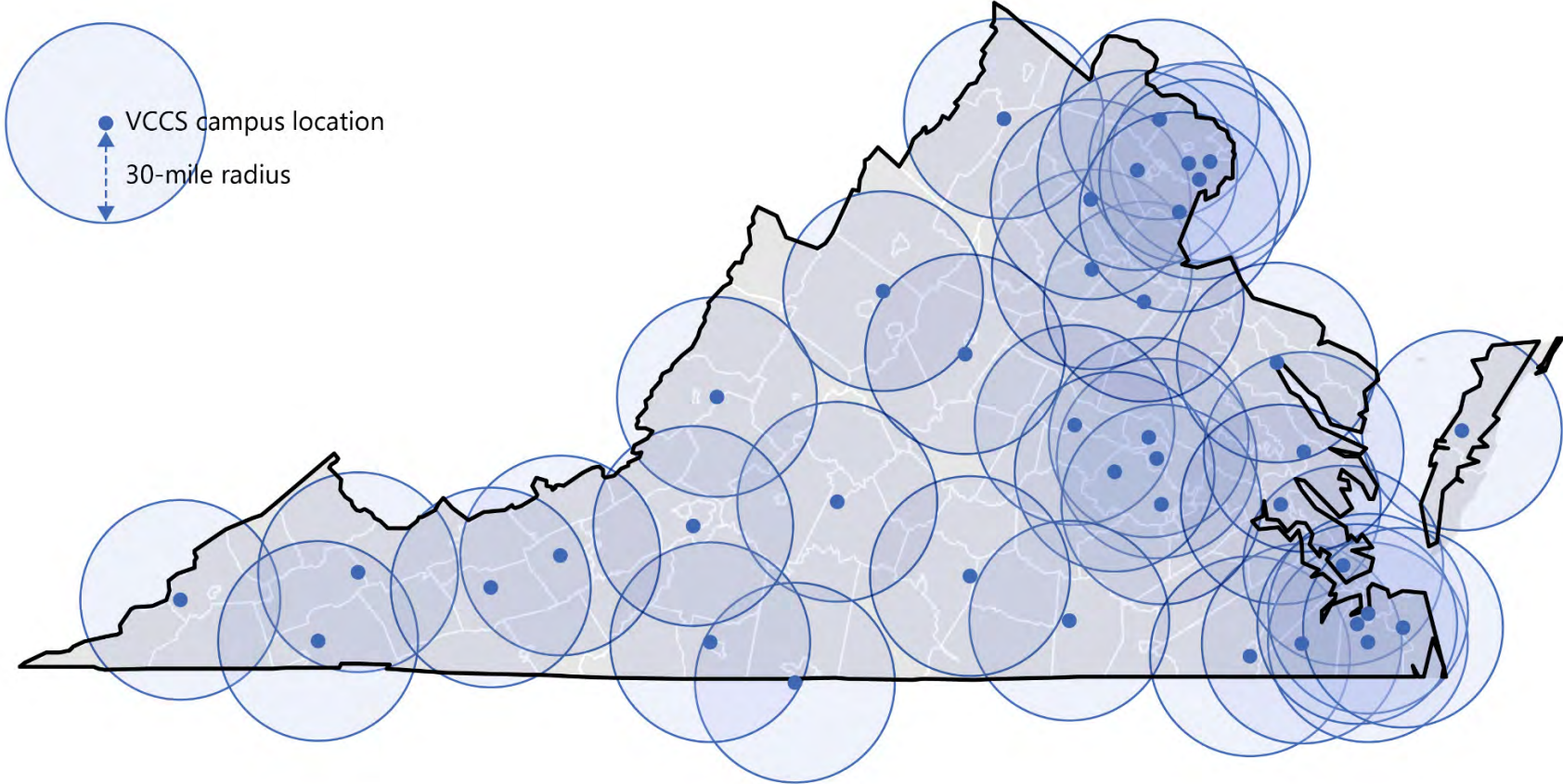
- operating costs per student FTE are relatively high, with increasing costs as a trend;
- enrollment is relatively low, with decreasing enrollment as a trend; and
- college is unable to offer core academic programs.

If a college meets these criteria, careful consideration should be given to the advantages and disadvantages of closure or consolidation, including (1) the impact on access to community college programs, (2) the impact on colleges’ ability to offer high quality and in-demand courses and training, (3) the potential for net savings to VCCS and the state, and (4) the impact on the local economy.

VCCS has historically used an informal goal that **all Virginians be within 30 miles** of a community college campus.

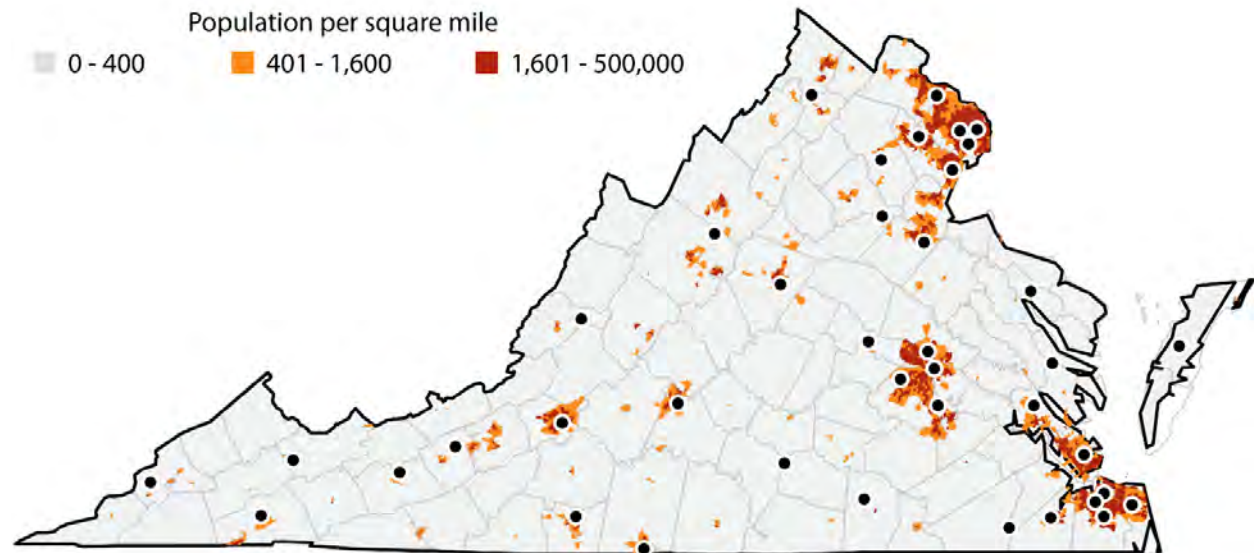
Other states have considered closing or consolidating community colleges. In 2011, the Program Evaluation Division of the **North Carolina** General Assembly recommended mergers at 15 of its 58 community colleges. To date, no mergers have occurred. **Connecticut and Louisiana** are currently considering consolidation of certain community colleges due to budget cuts.

FIGURE 5-4
Locations of VCCS campuses generally ensure Virginians are close to a community college



SOURCE: Virginia Geographic Information Network (VGIN) analysis of VCCS campus locations.
NOTE: Campus locations shown. Some colleges may offer classes at additional, non-campus sites.

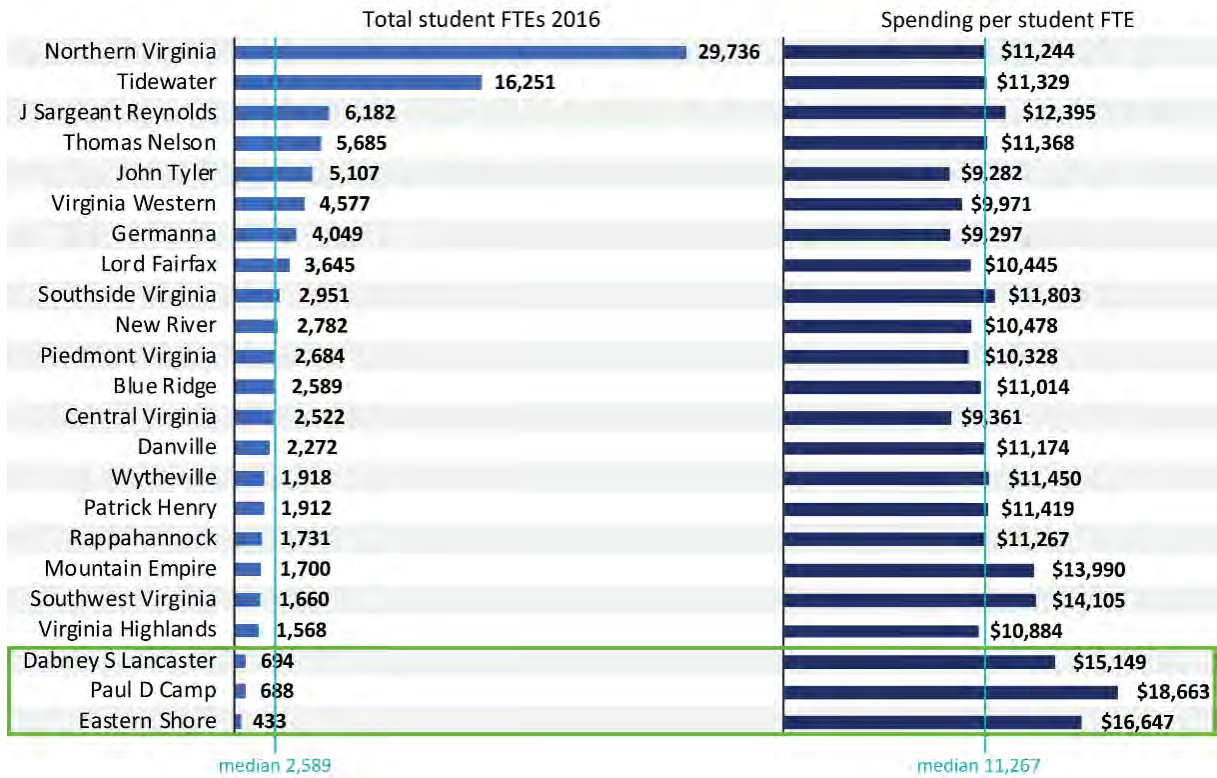
FIGURE 5-5
Locations of VCCS campuses mirror population centers



SOURCE: Population data from Environmental System Research Institute (ESRI) 2012 and VGIN analysis of VCCS campus locations.
NOTE: Campus locations shown. Some colleges may offer classes at additional, non-campus sites.

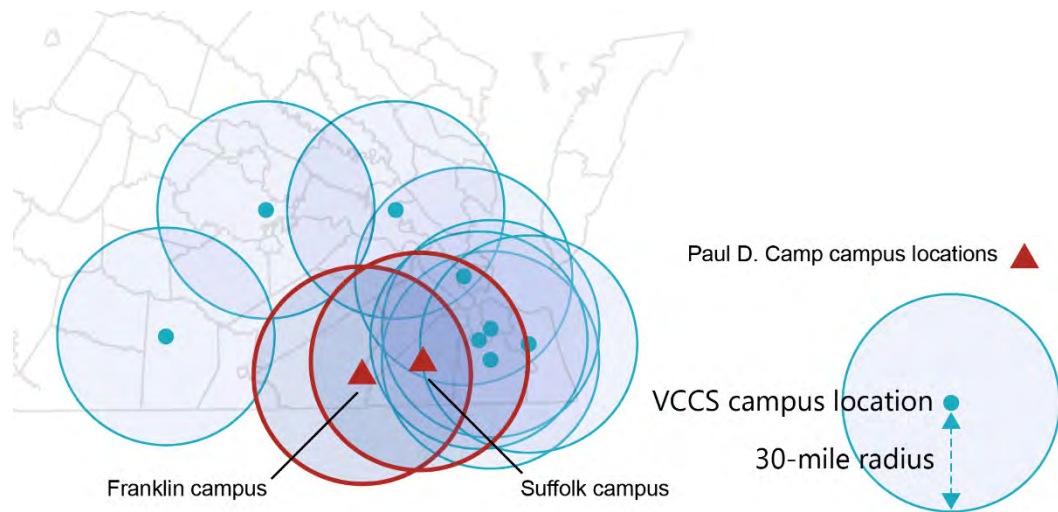
JLARC staff evaluated the advantages and disadvantages of closing or consolidating three community colleges: Eastern Shore, Dabney S. Lancaster, and Paul D. Camp. These three colleges have relatively high operating costs per student FTE and relatively low enrollments (Figure 5-6). Closing Eastern Shore or Dabney S. Lancaster would significantly reduce access to community college programs and services in those regions. Both colleges are geographically isolated and provide access to higher education in regions with few other institutions of higher education. Eastern Shore is further isolated by the Chesapeake Bay and the cost of crossing the Chesapeake Bay Bridge Tunnel, which includes an \$18 round-trip toll. However, Paul D. Camp is located near several other community colleges (Figure 5-7) and can be further assessed for closure or consolidation.

FIGURE 5-6
Colleges with highest spending per student FTE are also those with lowest enrollment



SOURCE: JLARC analysis of data from the Integrated Postsecondary Education Data System (IPEDS), FY16.
NOTE: Colleges within the box are the colleges with the lowest enrollment.

FIGURE 5-7
Paul D. Camp overlaps with some campuses from several other colleges



SOURCE: VGIN analysis of VCCS campus locations.
NOTE: Campuses shown are only those with a 30-mile radius that overlaps with Paul D. Camp. These include campuses of Southside Virginia, John Tyler, Thomas Nelson, Rappahannock, and Tidewater.

Closing Paul D. Camp would reduce access, and savings from any consolidation would be negligible

Closing Paul D. Camp Community College or consolidating it with a nearby college is not currently recommended. Closing the college or one of its two campuses (sidebar) would reduce access to higher education in the region, and consolidation would result in only minimal savings. If both campuses of Paul D. Camp were closed, more than 12,000 households would be more than 30 miles from the nearest community college campus. If the Franklin campus were closed, students would have to travel an average of 28 miles, but some would travel up to 43 miles. If the Suffolk campus were closed, students would have to travel an average of 16 miles, but some would travel up to 30 miles to reach the next closest community college campus. While this distance is within the target distance used by VCCS, staff at Paul D. Camp expressed concern over their students' ability to travel. Staff noted that many students work full-time, are single parents, or lack personal transportation and rely on others to get to and from the campus.

If a campus is eliminated, the students will still need access to a community college, and the cost of access will depend on the available capacity at the new college. Eliminating either campus would shift some students to Paul D. Camp's other campus, and eliminating the Suffolk campus would likely shift students to Tidewater Community College, which has a campus 20 miles away from Suffolk. Depending on available capacity, additional students could increase the use of facilities, parking, and require additional faculty and staff to increase the numbers of classes. It is estimated that the Franklin campus could absorb the students from the Suffolk campus but would have difficulty finding additional space for programs with specialty labs or equipment. Terminating any program would require approval of the State Board of Community Colleges.

Consolidating Paul D. Camp with another nearby community college, such as Tidewater or Southside Virginia, would maintain local access to community college programs, because the campuses would remain in place, but would result in minimal savings. Exact net savings would depend on the extent to which duplicative staffing and programs could be eliminated, but there would likely be limited potential to do so. If all existing programs continued to be offered at their current locations, the primary opportunity for savings would be from eliminating some executive level positions, such as one college president. Individual campuses also would likely need to retain staff in instruction, student support services, and building operations and maintenance. Some executive staff, such as a vice president of academic affairs or a workforce development director, would likely be needed to oversee operations at the consolidated campus. Consolidation could increase some staffing costs if two colleges have substantially different pay scales and the higher pay scale is adopted. The pay scales for faculty at Paul D. Camp are lower than at Tidewater and Southside Virginia community colleges.

Paul D. Camp has two campuses. One campus, in the town of Franklin, has 791 individual students and 349 FTEs. The other campus, in the city of Suffolk, has 770 individual students and 240 FTEs.

VCCS lacks a formal process for considering the closure or consolidation of community colleges

The policy manual for the Virginia Community College System outlines a **service area** for each college. These areas largely follow city or county borders, and delineate where a college can market its programs and the population it is expected to serve.

The question of whether to consolidate or close colleges and campuses will likely need to be reexamined in the future. Eastern Shore, Dabney S. Lancaster, and Paul D. Camp community colleges are in areas where the population is declining, which means that enrollment may continue to decline in the coming years. If colleges continue to be increasingly reliant on tuition and fees, rather than general fund appropriations, it may be necessary to consolidate these small colleges to ensure that Virginians residing within their service areas (sidebar) have access to affordable, in-demand, quality courses and training opportunities.

VCCS has no formal process for considering the closure or consolidation of community colleges, and its policies do not specify the roles of key entities, such as the State Board for Community Colleges. The state board is responsible for establishing community colleges, and has the final authority over the numbers, names, and locations of colleges. VCCS policy gives the authority to initiate change to college service area boundaries to the president or officials of local jurisdictions working with the president. However, VCCS policy does not stipulate the state board's role in initiating closure or consolidation and provides no criteria or guidelines for considering closure or consolidation. To ensure that VCCS retains a relatively efficient and effective structure, the state board should adopt a formal policy for periodically examining the need to close or consolidate colleges or campuses.

RECOMMENDATION 19

The State Board for Community Colleges should adopt a formal policy to periodically assess the need to close or consolidate community colleges or campuses. The formal policy should specify the roles of the board, the system office, college presidents, college boards, and local governments in decisions to close or consolidate colleges or campuses. Three college-level factors should prompt an assessment: (i) high operating costs per student FTE, with increasing costs as a trend; (ii) low enrollment, with decreasing enrollment as a trend; and (iii) inability to offer core academic programs. As part of the assessment, the board should use four criteria to determine when a college or campus should be closed or consolidated: (a) access to community college programs; (b) colleges' ability to offer quality, in-demand programs; (c) the potential for net savings; and (d) the impact of closure and consolidation on the local economy.

Consolidating or closing a community college would require approval from the Southern Association of Colleges (SACS) Commission on Colleges, the accrediting body for higher education institutions in the southern and mid-Atlantic regions. Receiving SACS Commission on Colleges approval would be necessary for the affected community colleges to remain accredited and continue receiving federal student aid from the

U.S. Department of Education. The approval process would likely take at least one year and requires several phases of review and approval by the SACS Commission on Colleges:

- preliminary approval by the commission board of written proposals for consolidation or closure submitted by the presidents of all affected community colleges;
- approval by a special committee, on the basis of recommendations from an on-site peer review of the colleges involved; and
- final approval by the commission board.

Opportunities for further system-wide efficiencies are limited

At present, there are limited opportunities for VCCS to gain further system-wide efficiencies. In addition to closing or consolidating colleges, three other types of system-wide changes can yield efficiencies. First, the system can centralize functions that are common to all colleges. Second, individual colleges can share administrative functions, academic or training programs, courses, or equipment. Third, colleges can provide some courses online rather than in a physical classroom.

VCCS has always been a centralized system, and recent initiatives have centralized the system's primary administrative and programmatic functions. Individual colleges already share a wide variety of functions, programs, courses, and equipment. Nearly all colleges participate in an arrangement for jointly providing online courses. Collectively, these initiatives and sharing arrangements have the potential to yield efficiencies when performed on a system-wide basis.

VCCS has centralized many administrative and programmatic functions

VCCS has already centralized the primary administrative and programmatic functions that are common across all 23 colleges. The Shared Services Center initiative currently being implemented is consolidating college's primary administrative functions under a single provider. The initiative has the potential to achieve substantial savings for VCCS, estimated at about \$4 million annually when fully implemented, compared to the current structure. Actual savings from the initiative will depend on the number of staff positions eliminated or repurposed at the colleges and the number of staff needed to operate the Shared Services Center. This initiative is expected to be fully implemented in 2019.

In addition to the Shared Services Center, the VCCS system office is now coordinating or performing several other functions that historically were performed by each college. The system office coordinates shared IT services and strategic procurement, and performs the facilities condition assessments for all colleges.

Most colleges already share some programs or equipment

Most of Virginia's 23 community colleges are already sharing some programs or equipment. At least 17 of the 23 colleges—including several in southwestern Virginia—currently share credit or non-credit programs. Most shared programs are health science programs, including dental hygiene, nursing, and radiography, and non-credit programs with high equipment costs, such as commercial driver's licensure and welding.

At least two shared arrangements involve sharing equipment for programs, but hosting the program at individual colleges. Eastern Shore, Germanna, and Rappahannock share mobile industrial manufacturing equipment. Piedmont Virginia, Germanna, and Central Virginia share a mobile welding unit.

Shared programs, courses, and equipment have been beneficial for community colleges. Colleges in shared arrangements noted that they can be cost-effective and beneficial to students, as these arrangements allow colleges to broaden their offerings to students while reducing the financial burden of starting a new program. These programs are in high demand, and sharing them, especially in geographic areas with limited population growth, may also reduce the likelihood of market saturation and ensure that more graduates of the program are able to find employment. Sharing equipment allows colleges to serve their students at their own location but avoid the start-up costs of expensive equipment. Rather than pay the start-up and equipment costs for a program such as dental hygiene, colleges can arrange to share equipment.

Nearly all community colleges share online courses, and online learning cannot completely replace physical campuses

Shared online courses are widespread throughout the system. All colleges may access shared courses through the Shared Service Distance Learning (SSDL) online platform, supported by Northern Virginia Community College. Shared courses such as foreign language, history, and other general education courses typically do not require hands-on training. In setting up the SSDL, the system office standardized the division of tuition and student FTEs for these shared courses. One college acts as the host college and provides the faculty, while other colleges allow their students to enroll in the course. Under this arrangement, the host school counts each student as one-third FTE and receives two-thirds of that student's tuition. The student's home college receives two-thirds of the FTE count and one-third of the tuition.

Online learning is not feasible as a replacement for physical campuses for three primary reasons. First, some rural communities still lack access to high-speed internet. For example, within the service area of Paul D. Camp, approximately 6,500 households (five percent) and more than 15,000 residents over 18 (nine percent) lack access to internet service with download speeds of even four megabits per second (Mbps), which is a low-tier service that may not support all aspects of an online course. A more suitable internet download speed for online classes is 10 Mbps, but more than 9,000 households (12.7 percent) and 16,500 people over 18 (13.2 percent) in the Paul D.

Camp service region do not have access to this internet speed. Although students may not have access to internet at home, they can still take online classes by using resources at the physical campus. A physical community college campus typically has an internet connection suitable for online courses, while also providing computer access to students through computer labs and other shared computers.

Second, courses for hands-on workforce programs and programs in the health sciences require access to physical equipment and cannot be completed exclusively online. For example, to complete an associate's of applied science degree in dental hygiene, students need access to a lab with the equipment and tools to practice their skills and develop competency. This is in addition to the required clinical learning that may take place at sites within the community.

Third, online courses may not be effective for students who lack motivation, discipline, or the ability to self-pace. (See *Efficiency and Effectiveness of K-12 Spending*, JLARC 2015.) Community college students are more likely than other college students to attend part-time, to have a lower socio-economic status, and to be first-generation college students—all populations that benefit greatly from increased in-person interactions. (See Chapter 2 on characteristics of community college students.) A physical campus provides students with a place to study, and the in-person resources, such as financial aid, student affairs, and career coaching, that are necessary for student success.

6 Community College Workforce Programs

SUMMARY Community colleges are a key provider of workforce training for the state’s employers, and they generally offer academic and career and technical education programs that reflect employers’ workforce needs. Colleges experience challenges in meeting employers’ workforce training needs. Workforce development program leaders at several colleges reported being unable to comprehensively meet employers’ demands for courses or credentials. A program established in 2016 by the General Assembly has the potential to help colleges address employers’ workforce demands, but funding should be better prioritized to ensure that it is used most efficiently and effectively.

The Virginia Community College System (VCCS) is one of the state’s primary providers of workforce training and development programs. All 23 colleges offer for-credit and non-credit programs and courses designed to provide the current and future workforce with new skills and industry-recognized credentials. VCCS is also the state administrator for Title 1 of the federal government’s largest workforce training program, the Workforce Innovation and Opportunity Act.

Assuming a prominent role in workforce development policies and programs is a resource-intensive undertaking. Colleges have expressed the need for additional resources to purchase new equipment and technology, hire faculty, collaborate with employers, and provide financial assistance to students. Workforce development policy will likely become an enduring priority for the state’s policymakers, and resources to fund workforce initiatives will be a recurring need. To ensure that limited resources are used most effectively and efficiently, state funding for these efforts will need to be spent according to clear priorities and objectives.

Colleges’ ability to offer programs that reflect employers’ needs remains a challenge

An increasing number of workforce development responsibilities have been assigned to VCCS along with expectations that the colleges will work closely with their regions’ employers to keep their programs relevant and responsive. VCCS has incorporated workforce development into its overall mission and has dedicated staff, equipment, and other infrastructure to workforce initiatives. For example, the system office and all colleges have a division of faculty and staff dedicated specifically to workforce development initiatives. Each community college provides credit and non-credit programs designed to train students in the skills and competencies needed for specific occupations. Colleges also work with employers to provide training programs that are customized to specific occupational needs.

Previous study identified challenges in some community colleges' ability to offer programs that reflect employers' needs

The workforce-oriented programs offered by the state's community colleges should generally be aligned with employers' occupational demands to ensure that students who invest time and money in these courses have promising job prospects once they complete their education and training. The 2014 JLARC study *Virginia's Workforce Development Programs* concluded that community colleges are generally offering education and training for the types of occupations for which there was the greatest employer demand. However, the report did identify some examples of region-specific in-demand occupations for which there were no relevant local community college programs. Examples included specific occupations in health care and transportation for which there was employer demand in southwestern and Southside Virginia but for which there were not corresponding local community college program offerings.

The report also found that some community colleges could better incorporate employer input into the development of their courses. It recommended that VCCS develop a system-wide policy requiring that colleges include a minimum number of employers on their curricular advisory committees and that the committees meet at least twice a year to review career and technical education programs. In response to the recommendation, VCCS provided training to deans and chief academic officers at the colleges on best practices for advisory committee management and the use of labor market information in developing and reviewing programs. According to VCCS, most colleges now require that a majority of their advisory committee members be employers, and the committees meet at least twice a year.

Meeting employer demands remains a challenge for some colleges

Overall, Virginia's community colleges offer programs in the career fields with the greatest statewide demand, such as health care, and colleges are generally offering programs in fields that align with regional employer demands. However, there are a limited number of region-specific high-demand career fields for which local colleges do not offer courses. For example, there is a statewide unmet demand for workers in the finance field, but 13 colleges do not offer relevant programs. This includes colleges that have a demand for finance-related occupations in their own regions. There is also statewide unmet demand for workers in maintenance, repair, and installation occupations, and three colleges do not offer programs in this field, despite evidence of unmet demands in their regions.

Colleges acknowledged being unable to offer programs for all in-demand occupations. Vice presidents for workforce development at ten colleges reported that their colleges are not able to provide all of the workforce programs and credentials that lead to employment in occupations that are in high demand by employers. Examples include an inability to offer programs to train certified nursing assistants, emergency medical technicians, pipefitters, welders, and hospitality managers. Reasons given include insufficient space, equipment, or faculty.

Community colleges have access to funds to help finance the costs of purchasing equipment for workforce development programs. Through the 2016-17 Appropriation Act, the General Assembly allocated \$10 million for VCCS from the Higher Education Equipment Trust Fund and designated this funding to support the equipment needs of VCCS workforce development activities.

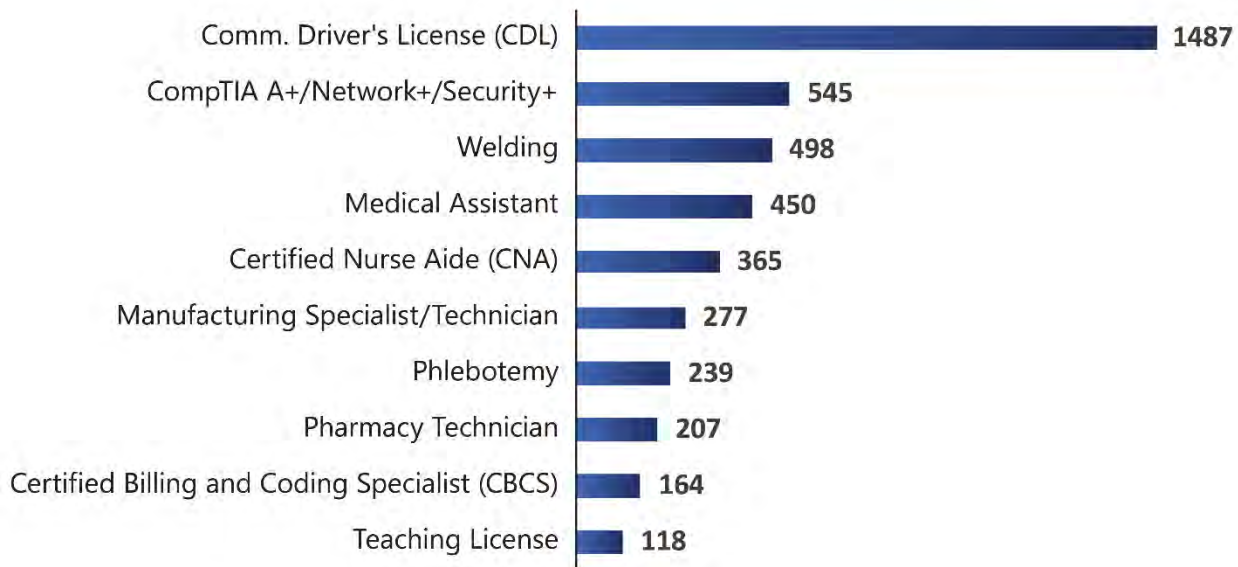
Criteria for receiving Workforce Credentials Grant funds are too broad to allow for prioritization

To help community colleges address gaps between the supply of and demand for workers with specific credentials and skills, the General Assembly established the New Economy Workforce Credentials Grant (WCG) Program in 2016. The program is intended to provide financial assistance to Virginians who elect to pursue a workforce credential and to encourage Virginians to pursue training in fields for which there is an insufficient workforce to meet employers' demands.

The WCG program has been applied to a wide variety of courses and credentials (Figure 6-1), but some stakeholders have questioned whether the grant funds have been used in a way that is consistent with the legislature's intent for the program. The funds appear to have been spent on courses and credentials for which there is an established demand by employers, which does partially fulfill the purpose of the program. However, it is less clear that the funds have been prioritized for courses and credentials for which employer demand is *unmet* by the available workforce, which is a key objective of the program.

The New Economy Workforce Credentials Grant Program was established to reduce the costs of non-credit community college programs leading to employment in high-demand occupations. As of June 1, 2017, 212 courses across all 23 community colleges had received funds and enrolled 5,484 students. (Total program enrollment is likely lower because a single student can enroll in multiple courses.)

FIGURE 6-1
WCG-funded programs with highest enrollments span variety of occupations



SOURCE: Data on system-wide enrollment in programs receiving funding from the Workforce Credentials Grant, June 2017.

In addition to addressing unmet demand for workers in certain occupations, the **WCG program was established** to make workforce training and associated credentials more affordable and to increase worker interest in jobs that require less than a bachelor's degree but more than a high school diploma.

The **State Council for Higher Education in Virginia** is required by statute to “undertake periodic assessments of the overall success of the [WCG] program and recommend modifications, interventions, and other actions.” SCHEV is currently undertaking a formal evaluation of the program to provide more insight into the extent to which it has reduced gaps between the demand for and supply of certain credentials.

Eligibility criteria do not prioritize funding for programs that would address documented unmet employer demands

According to the Code of Virginia, the WCG program was established for several purposes (sidebar), one of which was to create and sustain a supply of credentialed workers for high-demand occupations by addressing the gap between the skills needed by workers and the skills of the available workforce. Legislative intent for the new program was to address worker shortages for high-demand occupations. The Code defines a high-demand occupation as “a discipline or field in which there is a shortage of skilled workers to fill current job vacancies or anticipated additional job openings” and tasks the Virginia Board for Workforce Development with creating a list of Virginia’s high-demand occupations—the Virginia Demand Occupations List. The list is to be revised annually.

The state workforce board’s interpretation of the WCG program did not entirely fulfill the General Assembly’s intent in creating the program. The board classified 177 different occupations in 11 different fields as “high demand,” and individual colleges were instructed to select programs and credentials to be considered for WCG funding based on this list. The board used three different criteria to classify occupations and fields as high demand: (1) relevance to the state’s economic development strategy, (2) the occupations’ need for advanced skills, and (3) the projected statewide demand for the occupation. None of these criteria reflect the Code’s definition of a high-demand field, which emphasizes the existence of a worker shortage.

While the Board of Workforce Development is responsible for identifying high-demand occupations to provide guidance to colleges, VCCS is responsible for determining which college programs receive WCG funds, and VCCS’s interpretation of the WCG program did not entirely fulfill the General Assembly’s intent. The data and information that colleges are required to submit to VCCS to qualify their programs to receive WCG funds is insufficient to allow VCCS to determine whether WCG funds would help colleges address existing unmet employer needs. The colleges are required by Virginia regulation to use the workforce board’s list of high-demand occupations to determine whether a program should be submitted for *consideration* of grant funds to the VCCS system office and the State Board for Community Colleges (8VAC40-160-30). When colleges apply to VCCS to have a specific credential qualify for WCG funds, they are not explicitly required by VCCS to demonstrate that demand for the credential is actually *unmet* by the current workforce. Colleges are also not required to report on any measures of student interest in the course, and so funding cannot be prioritized for courses with low enrollment over those with high enrollment.

VCCS staff reported that a primary benefit of the WCG is making workforce training and credentialing more affordable for students. VCCS staff further emphasized that the program was the first attempt to provide general funds for non-credit programs, consistent with practices followed in other states. Staff indicated that as long as there was evidence of employer demand for the credential, it would be eligible for funds.

Therefore, non-credit programs for which there was insufficient student enrollment to meet employer demands were not clearly prioritized for WCG funds over programs that had higher, and perhaps sufficient, student enrollment.

Strategy is needed for prioritizing occupations for which there is regional unmet employer demand

A strategy is needed to ensure that certain non-credit programs are prioritized for these funds over others. To be consistent with legislative intent, colleges should be required to prioritize—although not limit—the use of WCG funds for non-credit programs for which demand clearly exceeds supply. These programs should also be relevant to the state’s economic development strategy and require advanced skills. Such a prioritization would maximize the extent to which the WCG program is targeted at unmet employer needs. Because there may be a balance of WCG funding available even after priority courses are funded, establishing an order of priority may not ultimately change the courses or credentials that qualify for WCG funding. Still, applying these criteria would ensure that colleges are focused foremost on the priorities of employers in their regions and that they are compelled to measure changes in unmet demand as they routinely update the list of programs that qualify for WCG funds.

The ability to expand a program may be contingent on having the space, equipment, or faculty to do so. Currently, it is not clear whether WCG funds are restricted to providing aid to students to encourage enrollment in the programs or whether a portion of the funds could be used to build a college’s capacity to offer a new program. The WCG statutes could be amended to explicitly allow colleges to use a portion of their WCG funds to address the infrastructure or personnel challenges associated with starting or expanding an in-demand program. However, WCG funds should be used for these purposes after other resources have been exhausted, such as the Higher Education Equipment Trust Fund.

The Virginia Board for Workforce Development is developing a web-based **Supply and Demand Dashboard** for analyzing the supply of and demand for specific occupations in Virginia. Once developed, the dashboard will allow the board and VCCS to more precisely determine whether employers’ occupation-specific demands are unmet by the available workforce.

RECOMMENDATION 20

The Virginia General Assembly may wish to amend the Code of Virginia to (i) clarify that Workforce Credentials Grant (WCG) funds be prioritized for, but not limited to, credentials for which there is a documented unmet employer demand and (ii) permit colleges to use a portion of their WCG funds to address the infrastructure or personnel challenges associated with program development or expansion if these challenges cannot be financed through other resources.

RECOMMENDATION 21

The Virginia Board of Workforce Development, in collaboration with the Virginia Community College System and the State Council of Higher Education for Virginia, should develop a methodology that can be used by community colleges to identify regional employer demands for occupations and distinguish between demand that is met by the existing workforce and demand that is not. The board should incorporate in the methodology both labor market data and qualitative feedback from employers.

Appendix A: Study mandate

HOUSE JOINT RESOLUTION NO. 157

Directing the Joint Legislative Audit and Review Commission to review the Virginia Community College System Report.

Agreed to by the House of Delegates, February 11, 2016

Agreed to by the Senate, February 23, 2016

WHEREAS, the Joint Legislative Audit and Review Commission has not comprehensively reviewed Virginia's Community College System since 1991; and

WHEREAS, Virginia's Community College System works with local school systems, four-year public institutions of higher education, and employers to develop credit, noncredit, and dual enrollment courses for those seeking degrees, credentials, and course credits; and

WHEREAS, Virginia's two-year institutions of higher education offer a less costly alternative to four-year institutions of higher education, but enrollment at two-year institutions constitutes a smaller percentage of the Commonwealth's total undergraduate enrollment than a decade ago; and

WHEREAS between FY 2006 and FY 2015, general fund appropriations to the Virginia Community College System rose \$53 million, the eighth largest increase of all state agencies; and

WHEREAS, between FY 2006 and FY 2015, the Virginia Community College System's central office spending rose 128 percent and staffing rose 39 percent; and

WHEREAS, the Virginia Community College System comprises 23 two-year public institutions of higher education with varying levels of student enrollment and spending and differing circumstances in which to raise revenue from public and private sources; and

WHEREAS, the Virginia Community College System comprises 40 campuses across the Commonwealth with total capital assets valued at \$1.34 billion; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Joint Legislative Audit and Review Commission be directed to review the Virginia Community College System.

In conducting its study, the Joint Legislative Audit and Review Commission (the Commission) shall (i) evaluate the system's success in providing Virginians with the education, training, and credentials needed to succeed in the workforce; (ii) determine whether the system's mission is aligned with the Commonwealth's educational and workforce development priorities and complements the missions of the Commonwealth's secondary and four-year higher education systems and its higher education centers, including through dual enrollment and transfer agreements; (iii) assess the system's success in making educational and training opportunities affordable; (iv) assess the spending and allocation of funds within the system; (v) assess how well the system's central office supports each institution; (vi) assess the adequacy of centralized data and information systems to measure institutional effectiveness and to support sound funding decisions; (vii) compare Virginia's Community College System to the community college systems in other states; and (viii) review other issues and make recommendations as appropriate.

All agencies of the Commonwealth, including the Virginia Community College System, the State Council of Higher Education for Virginia, the Department of Education, the Virginia Employment

Commission, and local school divisions, shall provide assistance to the Joint Legislative Audit and Review Commission for this study, upon request.

The Joint Legislative Audit and Review Commission shall complete its meetings for the first year by November 30, 2016, and for the second year by November 30, 2017, and the chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the next Regular Session of the General Assembly for each year. Each executive summary shall state whether the Commission intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a House or Senate document. The executive summaries and reports shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

Appendix B: Research activities and methods

JLARC staff conducted the following primary research activities:

- site visits to nine community colleges across Virginia, and two focus groups with faculty at one college;
- structured interviews with staff at the Virginia Community College System (VCCS) system office, staff at Virginia's public community colleges, staff at Virginia's public four-year colleges, state agency staff, higher education experts, and members of the State Board for Community Colleges;
- quantitative analysis of institutions' revenue, enrollment trends, and credential attainment and transfer rates from 2008 to 2016 as well as system office staffing and spending from 2008 to 2016, and analysis of the location of community college campuses;
- surveys of executive staff at all 23 community colleges; all staff at the VCCS system office; and dual enrollment staff at all 23 community colleges; and
- review of research literature and documents.

Site visits

Site visits were a key research method used by JLARC staff in conducting research for this report. JLARC staff conducted site visits at nine Virginia community colleges. In addition, JLARC staff were present at several meetings of the State Board for Community Colleges and the Advisory Council of Presidents.

Site visits to Virginia's public community colleges

Day-long site visits included interviews with numerous community college staff at nine Virginia community colleges. Site visits included structured interviews with the president of the college; the vice presidents of administration/finance, and information technology; and staff in the areas of transfer, dual enrollment, student success, financial aid, and workforce development. Topics covered included

- support from and interaction with the system office;
- affordability, tuition, and financial aid;
- funding, spending, and budget development;
- shared arrangements with other colleges;
- workforce and for-credit program development;
- student success trends, services, and challenges;
- dual enrollment offerings, funding, oversight, and challenges; and
- the transfer process, benefits, and challenges.

These site visits allowed JLARC staff to collect qualitative information and opinions to guide survey development and supplement quantitative analysis.

Colleges were selected for site visits based on size and geographic location. JLARC staff visited colleges in the following regions: northern Virginia, central Virginia, Hampton Roads/Tidewater Virginia, Southside Virginia, and southwest Virginia.

The following colleges were visited:

- Central Virginia
- Dabney S. Lancaster
- John Tyler
- New River
- Northern Virginia
- Paul D. Camp
- Piedmont Virginia
- Southside Virginia
- Tidewater

Attendance at state board and advisory council of presidents' meetings

Over the course of the study, JLARC staff attended several meetings of the State Board for Community Colleges and the Advisory Council of Presidents. These meetings allowed JLARC staff to observe the operations of both entities, gather additional information on programs and processes, and better understand the perspectives of board members and college presidents.

Structured interviews

Structured interviews were a key research method used by JLARC staff in conducting research for this report. Throughout the course of the study, JLARC staff conducted a total of more than 140 interviews. JLARC staff conducted structured interviews in lieu of site visits with staff at three additional Virginia community colleges, with staff at various community colleges related to the study topics of dual enrollment, shared programs, student advising, and student success, JLARC staff also conducted structured interviews with several state agencies, higher education experts, members of the State Board for Community Colleges, and other states.

Structured interviews of staff at Virginia's public community colleges

Structured phone interviews were conducted with staff at several of Virginia's community colleges. Three colleges (Mountain Empire, Germanna, and Eastern Shore) were selected for structured group interviews in lieu of site visits. These group interviews included staff knowledgeable about student success, and covered topics including student retention and progression; developmental education; advising and counseling; and student-tracking technology. JLARC staff also conducted individual interviews with the presidents of these three colleges.

Structured phone interviews were conducted with additional staff at various Virginia community colleges to obtain information about topics such as dual enrollment, student advising, shared for-credit and non-credit programs, career services, tutoring, the availability of various types of data, and to provide feedback on survey question development. These interviews allowed JLARC staff to collect qualitative information and opinions to guide survey development and supplement quantitative analysis.

Structured interviews of staff at Virginia's public four-year institutions and public K-12 school divisions

JLARC staff conducted structured interviews with the chief transfer officers at eight of Virginia's public four-year institutions:

- Christopher Newport University
- College of William & Mary
- George Mason University
- James Madison University
- Old Dominion University
- University of Virginia
- Virginia Commonwealth University
- Virginia Tech

Colleges and universities were chosen to ensure a range of institutions in terms of the number of transfer students accepted relative to the size of the institution. Topics of discussion included the benefits of transfer students, specific steps in the transfer process, student outcomes after transfer, and challenges with the transfer process. Topics discussed also included the benefits and challenges to the dual enrollment programs.

JLARC staff conducted phone interviews with staff responsible for dual enrollment programs at four K-12 school divisions in Virginia: Chesapeake, Fairfax County, Halifax, and Montgomery. Topics of discussion included the structure of the dual enrollment program, how course offerings are determined, the challenges and benefits of dual enrollment programs, the support services available to dual enrollment students, and opportunities to improve the effectiveness of the programs.

Structured interviews of state agency staff

Throughout the study, JLARC staff conducted structured interviews with numerous staff at the VCCS system office. Topics discussed included

- operations in the primary system office divisions;
- system office interaction with and support of the colleges;
- system-wide initiatives, including the Shared Services Center, the financial aid call center, the Community College Success Coach Initiative, the New Economy Workforce Credential Grant program, and several other recent and ongoing initiatives;
- challenges community college students face to earning a credential or transferring to a four-year institution; and
- strategies and practices for improving student outcomes, including the role of academic advising, tutoring, remedial course work, orientation, student development courses, early alert systems, and—more broadly—the use of technology to help students navigate community college.

JLARC staff conducted structured interviews with the Secretary of Education, staff at the State Council of Higher Education for Virginia (SCHEV), Virginia Department of Education (VDOE), Auditor of Public Accounts (APA), Virginia Department of Planning and Budget (DPB), and staff of the House Appropriations and Senate Finance Committees. Topics discussed included changes in spending and staffing, the higher education funding model, enrollment trends, data availability, policy changes, and collaboration between all levels of public education (school divisions, community colleges, and four-year institutions).

Structured interviews of higher education experts

JLARC staff interviewed community college experts affiliated with the Community College Research Center and the Education Commission of the States. These interviews were conducted to obtain information on dual enrollment and transfer programs.

Structured interviews of current state board members

JLARC staff conducted structured interviews with five current members of the State Board for Community Colleges to obtain information on board member orientations, system office staff support for the board, and board members' opinions on community college affordability, student success, and other relevant issues.

Quantitative analysis

JLARC staff analyzed data from a variety of sources to assess changes in funding, enrollment, attainment rates for degrees and certifications, and staffing levels at community colleges. JLARC staff worked with the Virginia Geographic Information Network (VGIN) to analyze data on college and campus locations. JLARC staff worked with the VCCS system office and DPB to obtain data specific to VCCS colleges, and collected data from the Integrated Postsecondary Education Data System (IPEDS) to compare VCCS colleges with community colleges in other states.

Student outcomes

JLARC staff used student and course-level data from SCHEV to analyze the rates at which community college students earned a credential or transferred to a four-year institution. The analysis focused on students entering community college for the first time in the fall of 2008, 2009, or 2010—approximately 84,500 individuals. The population was further restricted to students who: (1) were age 17 to 19, (2) sought a degree or credential, and (3) attempted at least 12 credits during their entry year. The resulting population was approximately 52,000 students, about 62 percent of all students entering community college for the first time in those years. For this cohort, JLARC staff determined the

- proportion of students who earned a community college credential or bachelor's degree within 6-8 years;
- length of time needed to earn a community college credential or degree;
- total number of credits accumulated while earning a credential or degree;
- proportion of students who took remedial courses, and the number of remedial credits attempted and earned;
- proportion of students who were dual enrolled, dual enrollment credits earned, and credential attainment rates compared to community college students who were not dual enrolled; and
- characteristics associated with credential attainment, including high school GPA, parents' education level, part-time or full-time enrollment, race, and other student characteristics.

For some of the analyses above, the results for community college students were compared to an analogously defined population of students who enrolled in public four-year institutions—that is, students entering a four-year institution for the first time in 2008-2010 who were age 17 to 19.

Adjusting for inflation

Throughout the study, JLARC staff adjusted dollar amounts for inflation using the Gross Domestic Product Implicit Price Deflator (GDP deflator) from the Federal Reserve Economic Data at the Federal Reserve Bank of St. Louis. The deflator used quarterly, seasonally adjusted observations from January 1 of each calendar year.

System office spending and staffing

JLARC staff used data provided by VCCS to analyze general operating (E&G) funds spent by the system office from 2008 to 2016, and to calculate the percentage of E&G funds that were retained by the system office for its internal operations. At the direction of JLARC staff, the system office adjusted this data to reflect only spending that was used on system office operations, as opposed to funds that were dispersed to the colleges. This analysis included the amount used by the system office in a given

year as a percent of the total appropriation. Because the analysis was comparing the percent of total appropriations retained over time, the data was not adjusted for inflation.

To calculate spending in different divisions of the system office, JLARC staff requested spending data from the system office. This data was provided yearly from FY08 to FY16, and included the division, department, fund, and account information, as well as the actual dollar amount spent. All dollars were adjusted for inflation to 2016 dollars using the GDP deflator. The analysis of system office spending was limited to spending on system office operations and staff, and excluded spending that was considered “pass through.” The pass through determination was made in consultation with the system office and covered funds used for capital projects and certain federal workforce investment act youth, adult, and dislocated worker programs. This analysis involved dividing the total spent at the system office into the amounts spent by each division (as indicated in data from the system office).

JLARC staff also used VCCS data to analyze system office staffing trends between FY08 and FY16. VCCS provided position descriptions, departments, divisions, fund source, and the full-time equivalent of all positions. JLARC staff isolated system office staff for FY16, and determined the number of FTEs by system office division. JLARC then isolated staff for FY08 by division, and consulted with the system office to determine what funding source was used to pay for any staff added between FY08 and FY16, and the duties of these new staff.

JLARC staff calculated employee-to-supervisor ratios using 2016 employee-level data from the Department of Human Resource Management (DHRM). This data identifies which employees are categorized as supervisors, and which employees directly report to that supervisor. JLARC staff also compared salaries among classified staff at the VCCS system office with other state employees, using the DHRM e480 query tool to collect job roles data from FY16.

Comparisons of VCCS spending, staffing, college enrollments to other states

JLARC staff used IPEDS data from the National Center for Education Statistics and data from the State Council of Higher Education for Virginia (SCHEV) to compare VCCS spending and staffing per student FTE to (1) public two-year institutions nationwide and (2) public two-year institutions within states that are part of the Southern Regional Education Board. The comparisons were made for the FY06-FY16 period. JLARC staff also used data from IPEDS and the U.S. Census Bureau to compare the number of public two-year institutions in Virginia compared to public two-year institutions nationwide and in states that are part of the Southern Regional Education Board.

JLARC staff used data from the U.S. Census Bureau and IPEDS to compare the number of people per community college in Virginia and nationwide. The analysis had three primary steps. First, JLARC staff calculated the number of public, two-year institutions in each state—only institutions that responded to the IPEDS survey are included in the IPEDS data. In addition, Indiana is excluded from the analysis because its community college system is viewed as one college by the federal government. Second, JLARC staff used 2016 estimates from the U.S. Census Bureau for the number of people in each state. Third, JLARC staff calculated the ratio of people per college in each state. This analysis was replicated for the number of people over age 18 per college.

JLARC staff used data from IPEDS to calculate the percentage of colleges in each state with relatively low student enrollment. Student enrollment was defined in terms of student FTEs in fall 2015 for this

calculation. This analysis had three primary steps. First, JLARC staff calculated the median FTE enrollment for public two-year institutions nationwide. Second, JLARC staff calculated the number of public two-year institutions in each state that had FTE enrollment less than the nationwide median FTE enrollment. Third, JLARC staff divided the number of public two-year institutions with FTE enrollment below the nationwide median FTE enrollment by the total number of public two-year institutions in each state.

JLARC staff calculated spending per student FTE using variables provided by IPEDS and SCHEV. Two calculations were made for this analysis. To see trends in VCCS spending per student FTE, total spending (operating and non-operating) was divided by annual student FTE enrollment as reported by SCHEV. In comparing VCCS spending per student FTE to spending per student FTE in other states, JLARC staff relied on IPEDS spending and enrollment data, which was equal to total expenses (operating and non-operating), and student FTE, which was the full-time equivalent based on the fall enrollment. Staff FTE per 100 student FTEs was calculated using variables provided by IPEDS. Staff FTE included all staff, and student FTE was the full-time equivalent students based on fall enrollment.

Community college campus locations

JLARC staff worked with the Virginia Geographic Information Network (VGIN) to map VCCS campus locations and determine a 30-mile radius around each campus. VCCS campus locations were determined using the addresses provided on community college websites, and Google maps. The 30-mile radius from each campus was calculated using straight miles rather than road miles. At the request of JLARC staff, VGIN provided the number of households that would be more or less than 30 miles from the nearest campus if certain community colleges and campuses were eliminated.

JLARC staff worked with VGIN to determine the number of residents within a community college's service area without access to specific internet speeds. VGIN relied on census-block data from the U.S. Census Bureau for this calculation. Service areas were applied as described in the VCCS policy manual.

Enrollment trends

JLARC staff used data from the E05 report from SCHEV to analyze trends in student enrollment. The E05 report provides data on FTE enrollment at each of Virginia's community colleges and public four-year institutions.

Analysis of net position and cash flow

JLARC staff used statements of net assets and statements of cash flow from FY08 through FY15, provided by the VCCS system office, to assess the financial health of each community college over time. Analysis included comparing changes in net position and changes in cash and cash equivalents from the beginning to end of the year, and between years.

Tuition and fees

JLARC staff used data from SCHEV and VCCS to report tuition and fees for the 2016-17 academic year. SCHEV reports the tuition and fees of Virginia's higher education institutions in the TF01 report and its annual Tuition and Fees report. Virginia's community colleges may charge non-E&G fees and

tuition add-ons, if approved by the State Board for Community Colleges. Data on these additional fees were gathered from meeting materials of the Board.

JLARC staff used IPEDS data to compare the growth in VCCS's tuition and fees with four-year institutions in Virginia and two-year institutions in other states. The analysis relied on published in-state tuition and fees for each college for academic years 2006-07 through 2015-16. Tuition and fees were adjusted for inflation using the GDP Deflator. The average tuition and fees for VCCS and other key benchmarks, such as two-year institutions in other states, were weighted using 12-month student FTE enrollment at each institution.

Net price

JLARC staff used data from the U.S. Department of Education's College Scorecard from academic years 2009-10 through 2014-15 to compare VCCS's net price with the net price of Virginia's four-year institutions and two-year institutions in other states. Data were adjusted for inflation using the GDP Deflator. The College Scorecard reports the overall net price for each institution, as well as the net price for various income groups within each institution. The system-wide net price for VCCS was weighted by the respective number of students receiving federal Title IV financial aid, as reported by the College Scorecard. The weighted average net price for students in individual income categories was similarly calculated. This analysis was replicated for Virginia's four-year institutions and two-year institutions in other states.

Student debt

JLARC staff relied on student-level data from SCHEV to examine borrowing among VCCS students. JLARC staff analysis focused on students who entered community college for the first time between 2008-09 and 2010-11 and followed these students through the 2015-16 academic year. This includes approximately 84,500 individuals. In order to calculate the percentage of students who borrow, the population was further restricted to students who: (1) were age 17 to 19, (2) sought a degree or credential, and (3) attempted at least 12 credits during their entry year. The resulting population was approximately 52,200 students. In order to calculate the median amount of debt among students who borrow in each academic program, the population was further restricted to students who: (4) filed a Free Application for Federal Student Aid (FAFSA), (5) borrowed at least once, and (6) completed the academic program/credential. The resulting population was approximately 16,300 students. In order to compare student debt between bachelor's degree recipients who began at VCCS and bachelor's degree recipients who began at a public four-year institution (controlling for Expected Family Contribution), the median amount of debt was calculated for each group of students, and included students who did not borrow.

The types of debt in the analysis include unsubsidized and subsidized federal loans, PLUS loans, Perkins loans, Title VII loans, institutional loans, loans from endowments and gifts, supplemental loans for students, and private loans. This analysis was replicated for students who began their studies at a four-year institution.

Repayment rates

JLARC staff used data from the US Department of Education's College Scorecard from academic years 2009-10 through 2014-15 to compare VCCS's federal loan repayment rates with the repayment rates of Virginia's four-year institutions and two-year institutions in other states. Average repayment rates for VCCS were weighted by the respective number of students in the repayment cohort, as defined by the College Scorecard. JLARC staff calculated one-, three-, five-, and seven-year repayment rates. This analysis was replicated for Virginia's four-year institutions and two-year institutions in other states.

Surveys

JLARC staff conducted four surveys to inform various aspects of the study. JLARC staff conducted all analysis of survey responses.

Survey of community college staff

JLARC staff surveyed executive staff at all 23 community colleges. The survey was administered to presidents, vice presidents of academic affairs, vice presidents of administration and finance, vice presidents of information technology, vice presidents of workforce development, and directors of financial aid. Staff were asked about the following topics:

- Experience with the system office, including satisfaction with system office assistance and implementation of new initiatives, beliefs about system-wide goals, and the roles and responsibilities of the system office versus the colleges
- Student services and strategies for supporting student success, including academic advising, tutoring, remedial course work, practices to ensure students receive needed services, and each college's capacity to provide adequate support services for students
- Student transfers to four-year institutions, including practices used to support the transfer process and track the academic outcomes of transfer students, any difficulties working with four-year institutions on transfer issues, and opportunities to improve the transfer process
- Dual enrollment, including any challenges to administering these programs and any opportunities to improve them
- Financial aid and affordability, including the types of financial aid services provided, any difficulties meeting the financial aid needs of students, and strategies used to make community college more affordable
- Academic and workforce program offerings, including whether colleges can provide all programs to meet the needs of four-year institutions and employers, any factors that make it difficult to meet their needs, and each college's ability to modify programs and courses
- Efficiency initiatives at the colleges, including shared functions with other colleges and any effective or unique practices used to reduce spending or achieve significant efficiencies

Response rates for each type of staff surveyed ranged from 100 to 74 percent, with an overall response rate of 88 percent (Table B-1).

TABLE B-1
Response rates for community college survey

College staff	Staff responding	Response rate
Presidents	23	100%
Vice presidents of academic affairs	21	91
Vice presidents of administration and finance	23	100
Vice presidents of workforce development	17	74
Vice Presidents of information technology	18	78
Directors of financial aid	17	74
Total	119	88%

Survey of community college dual enrollment coordinators

JLARC staff surveyed dual enrollment coordinators at all 23 community colleges in Virginia. Coordinators were asked about a range of topics, including

- types of dual enrollment courses colleges offer,
- practices used to ensure the quality of dual enrollment courses, and
- challenges colleges face to administering successful dual enrollment programs.

A total of 22 of the 23 dual enrollment coordinators responded to the survey, for a response rate of 96 percent.

Survey of vice presidents of academic affairs

JLARC staff collected data, through a survey instrument, on the numbers of faculty and non-faculty academic advisers and the caseloads. The survey was used to gather additional information on the capacity of community colleges to provide adequate academic advising services for students.

Survey of VCCS system office staff

JLARC staff surveyed all 238 staff at the VCCS system office to help inform JLARC staff's assessment of how effectively and efficiently the system office is performing its functions. Staff were asked about

- the assistance they provide for community college staff, and any factors that make it challenging to assist the colleges;
- their beliefs about system-wide goals and the roles and responsibilities of the system office versus the colleges;
- new system-wide initiatives developed by the system office, including whether they feel adequately informed about them;
- their work duties and responsibilities; and
- any opportunities to make the system office function more effectively or efficiently.

A total of 195 system office staff responded to the survey, for a response rate of 82 percent.

Review of research literature and documents

Throughout the course of the study, JLARC staff conducted a review of the research literature regarding the affordability of community colleges, enrollment trends at community colleges, and factors that influence student success. JLARC staff reviewed several governing documents for Virginia-specific programs. Two areas of research in particular—the tuition-setting process and financial aid advising services—were heavily informed by literature and document reviews.

Literature reviews

JLARC staff conducted an extensive review of the research literature related to several study topics, including the

- challenges facing students at community colleges;
- strategies for improving student outcomes at community colleges, including academic advising, remedial course work, orientation, student development courses, and tutoring;
- dual enrollment programs, and strategies for improving their effectiveness;
- student transfers from community colleges to four-year institutions, and strategies for improving the transfer process and outcomes of transfer students; and
- strategies for improving the affordability of community colleges.

Document reviews

Numerous documents related to community colleges in Virginia were reviewed by JLARC staff during the course of the study, including

- VCCS strategic planning materials, including the two most recent six-year plans developed by VCCS, and the quality enhancement plans and strategic plans developed by community colleges;
- various state policy documents, including the policy manual for VCCS, the State Policy on College Transfer developed by SCHEV, and the Governing Principles for Dual Enrollment Between Virginia’s Public Schools and the Virginia Community College System developed by VCCS and VDOE;
- transfer articulation agreements and guaranteed admissions agreements developed between community colleges and Virginia’s 15 public four-year institutions; and
- agenda items and supporting materials from meetings of the State Board for Community Colleges and the Advisory Council of Presidents.

Tuition-setting

In order to better understand VCCS’s tuition and fee setting process, JLARC staff reviewed various documents produced by VCCS and community college systems in other states, interviewed VCCS staff, and attended meetings of the State Board for Community Colleges. JLARC staff reviewed VCCS policy and state board bylaws and interviewed VCCS system office staff. In addition, JLARC staff attended meetings of the Board when tuition and fee rates were discussed, reviewed documents prepared for Board meetings from 2013 through 2017, and reviewed policies and practices in other states.

Examining the policies and practices of other states included reviewing other states' statutes, community college system policy manuals, audits in other states, documents prepared for community college system governing boards, and a survey by the State Higher Education Executive Officers Association.

Financial aid advising services

In examining the financial aid services provided by VCCS, JLARC staff relied on a review of literature from various sources, including the National Association of Student Financial Aid Administrators, the College Board, the Institute for College Access and Success, the U.S. Financial Literacy and Education Commission, and scholarly research. JLARC staff relied on student surveys to evaluate student satisfaction with VCCS financial aid advising services. A college may commission a survey, as frequently as each college wishes, of its students or alumni through its institutional research office, or through external survey providers. Surveys provided by external providers include the Community College Survey of Student Engagement, Survey of Entering Student Engagement, and Noel-Levitz surveys such as the Student Satisfaction Inventory. For each college, JLARC staff reviewed survey findings from the last five years to gain insight into the level of student satisfaction with financial aid advising.

Appendix C: Credential attainment rates and transfer outcomes by institution

This appendix provides additional information about rates of credential attainment at each of Virginia's 23 community colleges. Based on the cohort analysis conducted by JLARC staff, attainment rates varied widely by institution. The overall rate at which students in the cohort attained any credential—from a community college or a four-year institution after transferring—varied from a high of 51 percent at Wytheville Community College to a low of 26 percent at Thomas Nelson Community College (Table C-1).

Attainment rates varied more for community college certificate and slightly more for bachelor's degrees from four-year institutions. The rates at which students earned short- or long-term certificates ranged from 25 and 29 percent to two to three percent, respectively. By contrast, attainment rates for bachelor's degrees were highest for students from Northern Virginia Community College (19 percent) and lowest for students from Mountain Empire and Paul D. Camp community colleges.

Some community colleges had consistently higher or lower attainment rates

Some community colleges had relatively high or low attainment rates across multiple credentials. Overall, Wytheville Community College has the highest percentage of students in our cohorts who earned a credential or transferred to a four-year institution. Wytheville also had the highest percentage of students earning

- any credential (51 vs. 37 percent on average)
- a short-term certificate (25 vs. 10 percent on average)
- a long-term certificate (29 vs. 16 percent on average)

Northern Virginia Community College was far higher than any other community college in the percent of students transferring to a four-year institution (30 vs. 15 percent on average), and the percent of students earning a bachelor's degree (19 vs. 9 percent on average). It was lowest in short-term certificate attainment and the percent of students earning an occupational or technical associate's degree. Other high-performing institutions include Danville and New River community colleges.

Thomas Nelson Community College had the highest percentage of students who earned no credential and did not transfer to a four-year institution (71 vs. 61 percent on average). Other relatively low-performing institutions include J. Sargeant Reynolds, Tidewater, John Tyler, and Patrick Henry community colleges.

TABLE C-1
Attainment rates for community college credentials and bachelor's degrees by college

Community college	Any credential	Short-term certificate	Long-term certificate	Associate's (Occ/tech)	Associate's (transfer)	Bachelor's	No credential or transfer
Blue Ridge	36.0%	5.3%	14.5%	12.3%	18.3%	8.3%	62.0%
Central Virginia	37.5	14.5	18.8	8.0	9.3	6.0	61.0
Dabney S. Lancaster	37.3	7.7	14.0	17.0	10.3	8.3	62.0
Danville	45.3	12.0	19.5	12.8	11.3	6.3	53.3
Eastern Shore	38.7	6.3	15.0	11.0	14.3	8.3	59.3
Germanna	40.0	8.0	25.0	7.3	24.0	11.3	58.0
J. Sargeant Reynolds	28.3	7.5	9.8	7.0	8.5	7.0	68.0
John Tyler	29.8	4.5	14.5	9.5	9.0	11.0	66.0
Lord Fairfax	37.5	6.3	21.0	8.0	19.3	9.0	60.8
Mountain Empire	39.5	21.8	13.8	14.3	7.0	4.0	59.0
New River	43.3	6.3	17.3	12.5	7.8	10.8	55.3
Northern Virginia	38.3	1.8	12.8	3.8	25.5	19.0	57.3
Patrick Henry	34.5	7.5	13.8	13.8	12.3	5.5	65.0
Paul D. Camp	39.0	7.0	11.7	18.3	14.0	4.3	59.0
Piedmont Virginia	37.3	8.3	11.3	9.0	17.0	10.3	61.3
Rappahannock	37.0	12.0	21.3	6.5	17.8	10.3	62.3
Southside Virginia	40.3	14.5	9.3	11.3	12.3	5.3	58.3
Southwest Virginia	42.3	18.5	19.3	12.8	12.5	7.5	56.5
Thomas Nelson	26.0	3.8	10.8	5.0	12.3	11.3	70.8
Tidewater	29.3	3.0	3.3	7.0	15.5	9.8	66.3
Virginia Highlands	36.3	9.0	20.3	16.7	12.0	5.0	62.7
Virginia Western	34.3	6.8	11.3	11.3	12.0	10.0	63.3
Wytheville	51.3	25.0	28.8	13.5	11.8	7.5	48.3

SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.

NOTE: Analysis reflects the experience of students over seven years who first enrolled in college between Fall 2008 and Fall 2011.

Transfer students earned bachelor's degrees at lower rates and needed more time and credits to do so

Attainment rates for students seeking bachelor's degrees were lower for transfer students at nearly all public four-year institutions in Virginia (Table C-2). Rates were lower for transfer students at 13 of Virginia's 15 four-year institutions. The largest disparity was at the University of Mary Washington, where the rate of bachelor's degree attainment for transfer students was 18 percentage points lower than for non-transfer students. The University of Virginia and Virginia Commonwealth University also had substantially lower attainment rates for transfer students. Rates for transfer students were higher at two institutions: College of William and Mary, and Virginia Military Institute.

TABLE C-2
Bachelor's degree attainment rates for transfer and non-transfer students

4-year institution	Transfer students	Non-transfer students
Christopher Newport	79	82%
College of William and Mary	94	93
George Mason	63	74
James Madison	75	86
Longwood	70	75
Norfolk State	35	38
Old Dominion	48	57
Radford	67	69
University of Mary Washington	61	79
University of Virginia	81	95
University of Virginia-Wise	50	48
Virginia Commonwealth	52	67
Virginia Military Institute	87	76
Virginia State	41	48
Virginia Tech	80	86

SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.

NOTE: Analysis reflects the experience of students over seven years who first enrolled in college between Fall 2008 and Fall 2011.

Transfer students needed more time and accumulated more credits to earn a bachelor's degree at every public four-year institution (Table C-3). The difference in credits earned was largest at the Virginia Military Institute, where on average transfer students accumulated 26 more credits than non-transfer students. The difference was smallest at the University of Virginia-Wise and Christopher Newport University. Transfer students typically needed an additional six months to a full year or more to complete their bachelor's degree. The difference in time-to-completion between transfer and non-transfer students was a year or more at four institutions: Norfolk State University, Virginia State University, Virginia Commonwealth University, and the University of Mary Washington.

TABLE C-3**Average total credits accumulated and time to degree for transfer and non-transfer students earning bachelor's degrees**

4-year institution	Total credits accumulated		Time to degree (years)	
	Transfer students	Non-transfer students	Transfer students	Non-transfer students
Christopher Newport	137	126	5.1	4.3
College of William and Mary	138	119	4.6	4.1
George Mason	145	130	5.5	4.6
James Madison	143	129	5.3	4.4
Longwood	151	136	5.1	4.4
Norfolk State	157	136	6.2	5.1
Old Dominion	147	133	5.7	4.9
Radford	145	131	5.3	4.5
University of Mary Washington	137	122	5.2	4.2
University of Virginia	141	126	4.6	4.1
University of Virginia-Wise	153	143	5.3	4.7
Virginia Commonwealth	147	132	5.7	4.7
Virginia Military Institute	165	139	NA	4.3
Virginia State	148	130	5.7	4.6
Virginia Tech	149	132	5.0	4.4

SOURCE: JLARC cohort analysis of data on individual community college students maintained by SCHEV.

NOTE: Analysis reflects the experience of students over seven years who first enrolled in college between Fall 2008 and Fall 2011.

Appendix D: Transfer articulation agreements

Transfer articulation agreements differ widely in their content and the extent to which they explicitly guarantee the transfer of credits or admission into a degree program. Some agreements clearly state how credits will transfer and the requirements students must meet to qualify for admission to a program. For example, one articulation agreement between John Tyler Community College and Virginia Commonwealth University (VCU) provides for transfer into VCU's Bachelor of Social Work degree program (Figure D-1). The agreement states that VCU will award credit for the community college courses listed in the agreement, and notes that the transfer of credits will be evaluated on a course-by-course basis if the student does not complete an associate's degree in human services. The agreement lists the criteria students must meet in order to be guaranteed admission into VCU's social work program with junior standing.

Other transfer articulation agreements are largely limited to a list of equivalent courses between a community college and four-year institution. For example, one articulation agreement between Tidewater Community College and Norfolk State University (NSU) lists the community college courses that correspond to the courses needed for a bachelor's degree in social work from NSU (Figure D-2). The agreement states that each institution reserves the right to change the agreement as needed, and there is no explicit statement that community college courses will transfer as credit toward the student's bachelor's in social work rather than as elective credit. The agreement also does not provide for guaranteed admission into the social work program at NSU.

FIGURE D-1

Example of transfer articulation agreement providing conditions for credit transfer and guaranteed admission

**ARTICULATION AGREEMENT
For
Human Services-Pre-Social Work Track**

Between
John Tyler Community College
And
Virginia Commonwealth University (VCU) School of Social Work

For students planning to pursue a Bachelor of Social Work degree (BSW) from VCU.

Purpose: This memorandum of understanding has been developed within the framework of the Virginia State Policy on Transfer (<http://www.schev.edu/students/StatePolicyOnTransfer.pdf>) to facilitate the transfer of credits earned by students with Associate of Applied Science (A.A.S.) degree in Human Services-Pre-Social Work Specialization at John Tyler Community College into Bachelor of Social Work (BSW) at Virginia Commonwealth University. It is intended to provide students enrolled in the Human Services-Pre-Social Work Specialization at John Tyler Community College admission into the Bachelor of Social Work program at Virginia Commonwealth University. This agreement establishes a partnership between John Tyler and VCU for the benefit of students.

John Tyler will advertise this program to the general public within the John Tyler service area. The program will be promoted in the John Tyler catalog, website and other publicity material. Representatives of John Tyler and VCU will call attention to this articulation agreement when advising students.

Students who intend to transfer to VCU under the terms of this agreement must complete the *Letter of Interest* after completing 15 credits at John Tyler and send it to the Office of Undergraduate Admissions, Virginia Commonwealth University, 821 West Franklin Street, P.O. Box 842526, Richmond, VA, 23284-2526 (http://www.ugrad.vcu.edu/admissions101/transfer/VCCS-VCU_Interest_in_Transferring_Form.pdf). Students who submit the *Letter of Interest* will be contacted periodically by VCU representatives with important information to ensure a successful transfer to VCU.

Courses listed in this program will be reviewed, regularly, by the faculty of both institutions to ensure continuity of instruction, curriculum, and evaluation. The attached "Human Services – Pre-Social Work Specialization Transfer Program Table" lists the respective transfer credits that will be awarded by VCU for courses offered by John Tyler for transfer under the terms of the Agreement. This table will be updated as curricula evolve. VCU will work with students who have a Letter of Interest on file to ensure that curriculum changes made after the Letter is received but prior to matriculation to VCU will not negatively impact the admissions decision.

VCU School of Social Work guarantees admission into its BSW program with junior standing to those students in the John Tyler Associate Degree in Human Services – Pre-Social Work Specialization Program who have:

- A minimum cumulative grade point average of 2.5 on a 4.0 scale
- Received minimum "B" grades in HMS 100 (Social Work Designated Section), MEN 101, and MEN 102
- Received no individual grade lower than "C", A course in which a student receives a "D" or "F" grade can be repeated at the community college prior to transfer

SOURCE: Virginia Education Wizard.

FIGURE D-2
Example of transfer articulation agreement providing only course equivalencies

Norfolk State University and Tidewater Community College

Transfer Program Agreement

TCC Degree Program AA Liberal Arts NSU Degree Program Baccalaureate in Social Work (BSW)

Date February 2012

TCC Course Requirements	Credit Hours	TCC Substitution to Meet NSU Requirements	Credit Hours	NSU Equivalent Courses /Electives/Comments	Credit Hours
ENG 111 College Composition I	3			ENG 101 Communication Skills	3
HIS History Elective	3	HIS 101 or 102 History of Western Civilization I or II; or HIS 111 or 112 History of World Civilization I or II; or HIS 121 or 122 United States History I or II	3	HIS 100 or 101 History of World Societies I or II; or HIS 102 or 103 United States History I or II	3
MTH 158 College Algebra (or MTH 163)	3			MTH 105 Intermediate Algebra	3
SDV 100 College Success Skills	1			UNI 101 Introduction to University Life	0
Beginning Foreign Language Sequence	4	SPA 101 Beginning Spanish I or FRE 101 Beginning French	4	HUM 210 Humanities	3
Humanities Elective	3	HUM 201 or 202 Survey of Western Culture I or II	3	HUM 211 Humanities	3
ENG 112 College Composition II	3			ENG 102 Communication Skills	3
HIS History Elective	3	PLS 211 United States Government I or PLS 130 Basic of American Politics	3	POS 231 American State and Local Government	3
MTH 240 Statistics (or MTH 164)	3			SOC 355 Elementary Social Statistics	3
CST 100 Principles of Public Speaking	3			SCM 285 Principles of Speech	3
Beginning Foreign Language Sequence	4	SPA 102 Beginning Spanish II or FRE 102 Beginning French II	4	Optional Elective	3
Health/Physical Education Elective	2	HLT 110 Concepts of Personal and	3	HED 100 Personal and Community	2

SOURCE: Virginia Education Wizard.

Appendix E: Net price by college and income level

The net price of attending a community college full-time for one year in Virginia varies substantially across colleges and income levels (Table E-1). The net price includes the cost of tuition and fees, books and supplies, and other living expenses, minus any grants and scholarships a student receives. For example, for students with household incomes of \$30,000 or less, the net price in FY15 ranged from nearly \$8,000 at Northern Virginia Community College to approximately \$1,800 at Wytheville Community College. For students with household incomes of \$75,000-110,000, the difference in net price between these two colleges was even larger. Net price also varies widely among students with different income levels at the same community college. At four colleges—Northern Virginia, Piedmont Virginia, New River, and Central Virginia—the difference between the average net price for the lowest-income students and the highest-income students was around \$5,500. Differences in average net price across colleges can reflect a variety of factors, including

- differences in the cost of attendance, primarily due to different levels of living expenses or tuition and fees;
- differences in the methods colleges use to calculate the cost of attendance;
- differences in how colleges allocate grants, scholarships, and other aid among students based on household income;
- differences in the proportion of students applying for financial aid; and
- differences in the income distribution of the student body.

TABLE E-1
Average net price of community college varies substantially by college and income level (FY15)

College	Students with household incomes . . .				
	≤\$30,000	\$30,001 to \$48,000	\$48,001 to \$75,000	\$75,001 to \$110,000	≥\$110,001
Northern Virginia	\$7,976	\$8,410	\$10,443	\$13,033	\$13,481
Southside Virginia	7,674	8,014	8,212	7,815	n.a. ^a
Blue Ridge	6,544	7,006	8,907	11,337	11,805
Southwest Virginia	6,228	6,438	7,288	7,068	n.a. ^a
Paul D. Camp	6,220	5,717	6,741	11,088	n.a. ^a
Lord Fairfax	6,144	6,880	8,140	10,502	11,032
J. Sargeant Reynolds	6,131	7,298	8,748	11,291	11,341
Virginia Western	6,031	6,364	7,845	10,238	11,025
Thomas Nelson	6,024	6,662	8,552	10,712	11,208
Virginia Highlands	5,890	5,866	6,842	6,114	n.a. ^a
John Tyler	5,858	6,495	8,343	10,270	10,684
Germana	5,775	6,147	7,447	9,629	10,532
Tidewater	5,594	6,193	8,277	10,557	10,930
Piedmont Virginia	5,517	5,833	8,051	9,879	10,998
Danville	5,502	6,222	8,076	9,751	10,498
Patrick Henry	5,245	4,792	6,626	7,713	n.a. ^a
Eastern Shore	5,028	5,398	5,648	n.a. ^a	n.a. ^a
New River	4,951	5,332	7,561	9,681	10,480
Rappahannock	4,518	4,225	5,993	7,019	n.a. ^a
Mountain Empire	4,417	4,295	5,617	6,495	n.a. ^a
Dabney S. Lancaster	3,971	3,965	6,038	8,727	8,974
Central Virginia	3,097	3,743	5,024	7,568	8,640
Wytheville	1,808	2,064	3,262	4,211	6,922

SOURCE: JLARC analysis of 2014-15 data from the U.S. Department of Education's College Scorecard.

NOTE: Data are not adjusted for inflation. Includes only full-time, first-time, degree/certificate-seeking students who receive federal Title IV financial aid and who pay in-state tuition. Data reflect the average net price for all students in each respective income category. Income categories are calculated from the income values used by the college to calculate financial aid eligibility; for dependent students, this includes the student's and parents' income and for independent students, this includes the student's income and spouse's income (if applicable).

^a College did not report students in this income category.

Appendix F: VCCS system-wide initiatives

The system office for the Virginia Community College System (VCCS) develops a broad array of initiatives designed to improve the operations and performance of the VCCS system. These initiatives are often developed as part of the VCCS six-year plans, which are required under the Virginia Higher Education Opportunity Act of 2011 (also known as Top Jobs 21). Under Top Jobs 21, each public higher education institution must develop a six-year plan and submit it to the State Council of Higher Education for Virginia, the General Assembly, the Governor, and several other legislative and executive branch entities, including the Senate Finance and House Appropriations committees and the Department of Planning and Budget.

Since the General Assembly passed Top Jobs 21 in 2011, VCCS has developed more than 20 system-wide initiatives (Table F-1). In general, the initiatives have focused on three aspects of the community college system: student success and support services, financial aid and affordability, and administration and operations. Several initiatives designed to improve student outcomes are part of a broader effort to adopt the “guided pathways” approach, which seeks to provide a more structured college experience for students as they pursue a credential. For example, efforts to create “stackable” credentials are intended to make it easier for community college students to build on shorter-term credentials, such as a certificate or license, in order to earn an associate’s or bachelor’s degree in the same field. Other initiatives are designed to improve the efficiency of VCCS administration and operations by centralizing certain functions performed by all colleges. For example, the strategic sourcing initiative is intended to reduce purchasing costs by centralizing procurement of some goods and services.

System-wide initiatives can require significant time and effort from college staff. Initiatives focused on the same aspect of VCCS generally involve the same types of staff at the colleges. For example, initiatives designed to improve student outcomes can involve academic advisers, career coaches, faculty, and executive-level vice presidents. Most of the initiatives developed by the system office since 2011 have been mandatory for all colleges. Five initiatives—shared chief information officer/shared information security officer, Rural Virginia Horseshoe Initiative, financial aid processing by Tidewater Community College, and the veterans portal—were optional or were limited to specific colleges.

TABLE F-1
VCCS system-wide initiatives developed since 2011

Initiative	Description
Student success and support services	
Career coaching realignment	Placement of all career coaches, job placement, Middle College, student success coaches, and Great Expectations under Workforce Development.
Competency-based education*	System of instruction based on students' mastery of learning outcomes.
Remedial English / math redesign	Redesign of remedial courses to better meet students' remedial needs.
English and math pathways	Alignment of English and math requirements with various academic programs.
Experience articulated to credit*	Awarding of credit to students with noncredit workforce credentials who complete certain military training or a state-approved apprenticeship credential.
Meta-majors	Re-grouping of credential programs into career clusters to allow students to explore related careers and programs.
Multiple measures	Consideration of factors such as GED score, high school GPA, and others in addition to the Virginia Placement Test.
SAILS/Navigate	Student-level tracking and early warning system to support retention and student success. In 2018, Navigate will replace SAILS as the selected software.
Shared service distance learning	Online courses hosted by one college for all VCCS students.
Stackable credentials	Pairing of credentials leading to a higher credential (i.e., career studies certificate to associate's degree).
Student success center	Technical assistance, consulting, and professional development to help colleges implement action plans for student success.
Student success coaches	Proactive advising services for students at risk of not completing a credential.
Partner with K-12 to improve dual enrollment*	Work with VDOE and school divisions to build program pathways between high school and community college.
Passport credit program*	Map general education competencies at two-year colleges to those at four-year institutions to improve transfer to four-years.
Veterans Advising Program VERITAS (select colleges)	Support veterans from pre-enrollment through graduation at seven colleges with greatest enrollment of military veterans.
Financial aid and affordability	
Financial aid call center	Third-party staff available 24/7 to answer student questions about financial aid.
Open education resources	Course materials and textbooks for students at low or no cost.
Rural Virginia Horseshoe Initiative	Career coaches and scholarships for rural high schools and community colleges.
Tidewater financial aid processing	Financial aid processing by Tidewater Community College for nine community colleges.
Workforce credential grant	Financial assistance for students enrolled in certain workforce credential programs.
Workforce Enterprise System (WES)	Non-credit registration system to streamline pre-registration and payment.
Administration and operations	
Identity management program*	Upgrades or replacements of data security and student information, financial, and human resources information systems.
Peoplesoft	Software for human resources management across VCCS.
Performance-based funding	Funding strategy based on student success outcomes.
QUINN	Reporting software for various Oracle-based information systems.
Replace/upgrade Enterprise Learning Management System (LMS)*	Student communication tool for online learning.
Shared chief information officer and information security officer	Opt-in programs for colleges to access staff skilled in IT security policies and other IT skill sets.
Shared services center	Centralizing functions such as human resource management, collections, and payroll for all 24 VCCS entities into one location.
Strategic sourcing (procurement)	Leverages delegated authority for system-wide procurement.

SOURCE: JLARC analysis of Virginia Community College System six-year plans and updates to the State Board of Community Colleges.

* Initiatives are outlined in the six-year plan for 2018-2024, but have not yet been implemented.

Appendix G: Community college enrollment trends

Between 2007-08 and 2015-16, enrollment declined substantially at most of the 40 campuses in the Virginia Community College System (VCCS) (Table G-1). System-wide, the median change in the number of full-time equivalent (FTE) students enrolled in courses at a VCCS campus was a decline of about 16 percent. Enrollment increased at just eight campuses—four campuses at Northern Virginia Community College and one campus each at Germanna, John Tyler, Thomas Nelson, and Tidewater. Enrollment declined by around 50 percent at two campuses with two colleges.

While FTE enrollment at VCCS's campuses has declined nine percent since 2007-08, it increased 74 percent for online learning programs and declined moderately (three percent) at off-campus sites such as high schools and business centers. The median change in online FTE enrollment over this period was an increase of about 65 percent, and all but two of the 23 community colleges experienced increases in online enrollment. The median change in FTE enrollment at off-campus sites was an increase of about 17 percent, with off-campus enrollment increasing at 12 colleges.

TABLE G-1

Community college enrollment (FTE) for campuses, online learning programs, and off-campus sites

College	Location	2007-08	2015-16	Percent change
Blue Ridge	Main campus	2,511	2,225	-11.4%
	Online learning	532	816	53.5
	Off-campus sites	530	333	-37.2
Central Virginia	Main campus	2,448	2,113	-13.7
	Online learning	413	637	54.1
	Off-campus sites	429	568	32.5
Dabney S. Lancaster	Main campus	699	536	-23.4
	Online learning	67	125	87.1
	Off-campus sites	271	260	-4.1
Danville	Main campus	2,386	1,836	-23.0
	Online learning	272	281	3.4
	Off-campus sites	511	553	8.2
Eastern Shore	Main campus	510	403	-21.0
	Online learning	91	54	-40.6
	Off-campus sites	147	94	-36.2
Germanna	Main campus	764	508	-33.5
	Fredericksburg campus	2,639	2,846	7.8
	Online learning	635	1,508	137.4
	Off-campus sites	571	730	27.7
J. Sargeant Reynolds	Main campus	7,149	4,213	-41.1
	Downtown campus	0	1,917	n.a.
	Western campus	0	250	n.a.
	Online learning	1,170	2,458	110.0
	Off-campus sites	1,210	282	-76.7

Appendixes

John Tyler	Main campus	2,313	1,919	-17.0
	Midlothian campus	2,308	2,566	11.1
	Online learning	967	1,799	86.1
	Off-campus sites	647	931	43.9
Lord Fairfax	Main campus	2,120	2,042	-3.7
	Fauquier campus	829	613	-26.0
	Online learning	412	1,303	216.0
	Off-campus sites	704	1,136	61.2
Mountain Empire	Main campus	2,584	1,257	-51.4
	Online learning	0	663	n.a.
	Off-campus sites	0	400	n.a.
New River	Main campus	2,017	1,016	-49.6
	Online learning	898	1,343	49.5
	Off-campus sites	853	1,278	49.8
Northern Virginia	Main campus	12,854	13,099	1.9
	Alexandria campus	8,569	7,166	-16.4
	Loudoun campus	4,203	4,756	13.1
	Manassas campus	3,736	4,692	25.6
	Medical campus	931	894	-4.0
	Woodbridge campus	4,221	4,787	13.4
	Online learning	3,698	8,102	119.1
	Off-campus sites	1,929	2,849	47.7
Patrick Henry	Main campus	1,605	1,163	-27.5
	Online learning	758	742	-2.2
	Off-campus sites	219	460	109.9
Paul D. Camp	Main campus	407	349	-14.1
	Suffolk campus	373	240	-35.6
	Online learning	169	258	52.2
	Off-campus sites	277	244	-12.0
Piedmont Virginia	Main campus	2,468	2,437	-1.3
	Online learning	294	684	132.9
	Off-campus sites	532	728	36.7
Rappahannock	Main campus	626	508	-18.8
	Warsaw campus	512	429	-16.3
	Online learning	424	746	76.2
	Off-campus sites	617	773	25.3
Southside Virginia	Main campus	683	627	-8.1
	Daniel campus	797	629	-21.1
	Online learning	704	890	26.4
	Off-campus sites	2,134	1,296	-39.2
Southwest Virginia	Main campus	1,794	1,061	-40.9
	Online learning	696	869	24.8
	Off-campus sites	512	402	-21.4
Thomas Nelson	Main campus	4,852	4,585	-5.5
	Historic Triangle campus	438	1,059	142.0
	Online learning	917	1,970	114.7
	Off-campus sites	1,605	389	-75.8

Appendixes

Tidewater	Main campus	2,468	3,043	23.3
	Chesapeake campus	2,949	2,502	-15.2
	Norfolk campus	3,082	2,448	-20.6
	Virginia Beach campus	9,378	7,633	-18.6
	Online learning	4,781	5,956	24.6
	Off-campus sites	2,083	1,253	-39.8
Virginia Highlands	Main campus	1,696	1,083	-36.2
	Online learning	191	510	167.3
	Off-campus sites	250	349	39.6
Virginia Western	Main campus	4,049	3,635	-10.2
	Online learning	782	1,068	36.6
	Off-campus sites	898	1,197	33.2
Wytheville	Main campus	1,013	550	-45.7
	Online learning	550	1,078	96.2
	Off-campus sites	858	663	-22.7

SOURCE: JLARC analysis of SCHEV data.

NOTE: Student FTE enrollment data are rounded. Data reflect student FTE enrollment during the 2007-08 and 2015-16 academic years. Data are duplicated counts within each college. Off-campus sites include locations such as high schools and business centers. Off-campus sites do not include the Institute for Advanced Learning and Research, the Roanoke Higher Education Authority and Center, the Southern Virginia Higher Education Center, or the Southwest Virginia Higher Education Center.

Appendix H: 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 this report to Virginia's Secretary of Education, the Virginia Community College System, the State Council of Higher Education for Virginia, the Virginia Department of Education, the Virginia Board of Workforce Development, and Paul D. Camp Community College.

Appropriate corrections resulting from technical and substantive comments are incorporated in this version of the report. This appendix includes response letters from the following:

- Virginia's Secretary of Education
- Virginia Community College System
- State Council of Higher Education for Virginia
- Virginia Department of Education
- Virginia Board of Workforce Development



COMMONWEALTH of VIRGINIA

Office of the Governor

Dietra Y. Trent, Ph.D.
Secretary of Education

September 5, 2017

Mr. Hal E. Greer
Director
Joint Legislative Audit and Review Commission
919 East Main Street
Suite 2100
Richmond, VA 23219

Dear Mr. Greer:

Thank you for the opportunity to review the draft report *Operations and Performance of the Virginia Community College System*. I want to commend your staff for their thorough research, insightful findings, and practical recommendations. Our system of higher education and community colleges is highly complex, and I appreciate the JLARC team's commitment to portraying its performance in an accurate and balanced manner.

The Virginia Community College System (VCCS) has played a central role in education for over 50 years, and its role is more important than ever in providing students with the education and training they need to be successful in the New Virginia Economy. As noted in the report, VCCS has led numerous initiatives aimed at supporting student success and promoting access through affordability. As in any system, there are continual opportunities to improve, and we look forward to determining how best to incorporate the report recommendations to maximize success, access, and efficiency in our community colleges.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Trent", written in a cursive style.

Dietra Y. Trent



August 30, 2017

The Honorable Robert D. Orrock Sr., Chair
Joint Legislative Audit and Review Commission
Pocahontas Building
900 E. Main Street
Richmond, Virginia 23219

Dear Delegate Orrock:

On behalf of Virginia's Community Colleges, I would like to express our appreciation for both the professional way this review was conducted by the staff of the Joint Legislative Audit and Review Commission and for their resulting balanced and accurate conclusions and recommendations.

Virginia's Community Colleges exist, as our mission statement says, "To give everyone the opportunity to learn and develop the right skills so lives and communities are strengthened." As mentioned in this report, our colleges, collectively, represent Virginia's largest institution of higher education in terms of enrollment, accounting for 36 percent of all public higher education student FTEs in Virginia. Our open enrollment policy is key to expanding access to higher education and "critical to the state's economy," given the increased credentialing requirements of the modern workplace.

Fulfilling our mission requires a delicate balance between providing affordable access to higher education and workforce training opportunities while ensuring that those opportunities are high quality for individuals seeking to elevate their lives. Striking that balance is no easy task when operating under fiscally restrained circumstances.

Affordability has long been a hallmark of the image and reputation of Virginia's Community Colleges. We take great pride in the fact that we are the most affordable option for postsecondary education in Virginia and that the JLARC report finds evidence to support this assertion. As the report says, the vast majority of community college students in Virginia do not borrow to finance their education. There is even evidence that bachelor's degree earners who began at one of our colleges borrow less too. "The primary reason for lower debt is the lower cost of attendance at community colleges," according to the report.

We contribute to that affordability by maximizing the resources that our students and Virginia's general fund provide to operate our colleges, which the report finds is, "A relatively efficient structure compared to community college systems in other states." That's led by a central system office which "provides effective support and strategic leadership" and extends to the individual colleges that, "are already lean – 17 of the 23 VCCS colleges have fewer staff per 100 student FTEs than the average at peer colleges in the Southern Regional Education Board." We also place a premium on efficiency, finding ways to stretch resources whenever possible. While the report concludes that, "Opportunities for further system-wide efficiencies are limited," we seek them yet.

Our colleges largely serve individuals from Underrepresented Populations (URPs), which presents challenges not often shared by four-year universities. Community college students are more likely to be older, enrolled part-time, from low-income households, and the first in their family to attend college. "According to the research literature, these factors – individually and in combination – are associated with negative student outcomes in higher education." Accordingly, we see among our students college completion rates that trail Virginia's public universities but are "comparable to community college rates across our region and the nation as a whole."

The Honorable Robert D. Orrock, Sr.
August 30, 2017
Page 2

We concur with the report's findings that more campus-based academic advisors are needed at our colleges. Our Shared Services Center, which is just beginning to operate, was created in part to free up resources to support this priority. Additional resources, beyond that savings, however, will be needed to implement the report's recommendation regarding adding academic advisers. Further, we have convened a taskforce of leaders from across our colleges to examine our enrollment and student retention practices with the intention of improving them, not to mention the technology investments we are making to improve our online application and virtual guidance offerings.

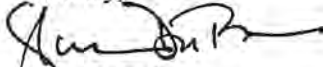
We are in the process of working with the Virginia Department of Education to revise and improve dual enrollment offerings we provide in partnerships with high schools across Virginia. While today's version of Dual Enrollment is achieving its stated purpose for some students, we believe it could serve more students and do so more efficiently and purposefully.

Further, our dialogue continues with the State Council for Higher Education in Virginia (SCHEV) and both public and private universities on how to best continue, expand, and make more transparent the many transfer opportunities we now offer – confident that doing so would benefit families, students and the greater Commonwealth.

We also concur that the work of our colleges is not finished when it comes to ensuring that our workforce developments programs – which the report describes as a resource-intensive undertaking – meet the needs of Virginia businesses. As the report mentions, we cannot today meet every demand, because of insufficient space, equipment, faculty, and resources. We are encouraged, however, by the report's indication that current labor data indicates that "All colleges offer programs in career fields with the greatest statewide demand, such as health care, and colleges are generally offering programs in fields that align with regional employer demands."

In closing, this JLARC report represents the first look at the operations of Virginia's Community Colleges in more than a quarter-century. We take from its finding and recommendations that we are pursuing the right priorities, operating in an efficient and responsible way, and keeping the benefit of the students and communities that we serve at the center of our focus. We are further grateful for the policy suggestions provided that can help us find ways to pursue and realize our public mission and bring its benefits to even more people.

Sincerely,



Glenn DuBois
Chancellor



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

Peter Blake
 Director

(804) 225-2600
 www.schev.edu

August 30, 2017

Mr. Hal E. Greer
 Director
 Joint Legislative Audit & Review Commission
 919 East Main Street Suite 2101
 Richmond, VA 23219

Dear Mr. Greer:

Thank you for sharing the JLARC report, *Operations and Performance of the Virginia Community College System*. The report is timely, and its recommendations are consistent with priorities that SCHEV has long advocated and worked to achieve in collaboration with both Virginia's community colleges and the rest of our higher education institutions. SCHEV looks forward to working with VCCS, the General Assembly, the Governor, and others to implement the report's recommendations.

I would like to take advantage of the present opportunity to bring to your attention a current interest of SCHEV's concerning the multiple purposes of dual enrollment and its relation to the depth and quality of an undergraduate education. The report understandably emphasizes one major purpose of dual enrollment—specifically, to facilitate faster degree completion of students when they enter higher education—and several of the recommendations that are oriented toward enabling this to happen more frequently. For many students, however, faster completion is not always the primary purpose of taking dual enrollment courses in high school. This is likely one reason behind the report's finding of higher than expected credit accumulations for dual enrollment students at time of baccalaureate degree completion. Indeed, from policy discussions SCHEV staff conducted with institutions over the 2016-17 academic year, we have identified several valuable purposes of dual enrollment, such as (not in order of importance):

- Contribute to enhancement of the inherent rigor and quality of high school curricula;
- Promote more effective transitions to postsecondary education and the workforce for students from all backgrounds;
- Promote better preparation for social/behavioral demands of college and the workforce;
- Contribute to enhanced student success and quality outcomes in postsecondary education; and
- Provide opportunity for reducing time-to-completion and cost in postsecondary degree completion.

Mr. Hal E. Greer
August 30, 2017
Page 2 of 2

Any new policies or data collection practices that may result from the report should be instituted with these multiple purposes in mind. Faster completion is a great benefit for many students, and for the Commonwealth, but it is not the only benefit of dual enrollment. There are many students for whom the value of dual enrollment will be more about adding depth to their secondary and postsecondary educations than reducing the time spent pursuing a baccalaureate education.

I also would like to point out that SCHEV now specifically is engaged in a collaborative effort to implement two bills from the 2017 General Assembly that bear directly on recommendations of the report: HB 1336 on dual enrollment, and SB 1234 on the passport program credential. We have established a multi-institution Advisory Committee on Dual Enrollment and General Education Transfer to help us implement the two bills. We intend this implementation to result in improved communication and transparency for students and families, stronger quality assurance, and better transferability of community college courses, including (but not limited to) dual enrollment courses. Data analyses and recommendations from the report will be an important input for the Advisory Committee as we proceed with this work over the next couple of years.

Thank you again for the opportunity to review and comment on the report. I expect it to add significant value to SCHEV's efforts to promote affordability, high quality, and attainment in Virginia's educational system.

Sincerely,



Peter Blake



COMMONWEALTH of VIRGINIA

Steven R. Staples, Ed.D.
Superintendent of Public Instruction

DEPARTMENT OF EDUCATION
P.O. BOX 2120
Richmond, Virginia 23218-2120

Office: (804) 225-2023
Fax: (804) 371-2099

August 31, 2017

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for the opportunity to review and comment on the Joint Legislative Audit and Review Commission's draft report on *Operations and Performance of the Virginia Community College System*. The draft report addresses major issues and concerns that have been raised by career and technical education administrators in Virginia's school divisions. The draft report's recommendations provide helpful guidance for the Commonwealth to create more robust dual enrollment opportunities for high school students.

We have provided comments and information under separate cover that we trust will be useful as you finalize this report.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven R. Staples".

Steven R. Staples

SRS/ZLR/bsj



Commonwealth of Virginia

VIRGINIA BOARD OF WORKFORCE DEVELOPMENT

Todd P. Haymore
Secretary of Commerce and Trade

Sara J. Dunnigan
Executive Director

Mark A. Herzog
Chairman

August 31, 2017

Mr. Hal E. Greer
919 E Main Street
Richmond, VA 23219

Dear Mr. Greer:

On behalf of the Virginia Board of Workforce Development, I thank you for providing us with the opportunity to review the draft of the JLARC report, *Operations and Performance of the Virginia Community College System*. We appreciate your review of the Board's contributions to the success of the Workforce Credential Grant Program.

We share your interest in ensuring that the workforce development system is directed in a way that helps close the skills gap in Virginia and we recognize the important role that skills training and workforce credentials play in accomplishing that goal.

The Board takes its responsibilities under the grant very seriously, as evident by the work of the Board's Demand Occupation Taskforce. The Taskforce adopted a data-driven strategy to identify industry sectors and occupations that are in high demand and ensure that credentials funded through the Workforce Credential Grant Program led to jobs in strategic industries. Since the implementation of the program, the Board has continued to build new capabilities to help identify areas of critical workforce shortages, deepen our understanding of labor market conditions in Virginia's diverse regions, and refine our methodology for identifying high-demand occupations. For example, the Labor Supply and Demand Dashboard shows the relationship between the number and types of jobs currently available in each career cluster and the production of newly trained individuals in these clusters. This information enables the Board to identify occupations for which a greater supply of qualified workers is needed.

We stand ready to work with the programs' eligible institutions, most notably the Virginia Community College System, as well as the State Council on Higher Education in Virginia, to ensure we are utilizing the Workforce Credential Grant Program effectively and efficiently in order to meet the needs of employers in high-demand fields and continue fueling economic growth in the Commonwealth.

Sincerely,

A handwritten signature in black ink, appearing to read "Sara J. Dunnigan", written over a horizontal line.

Sara J. Dunnigan
Executive Director



JLARC.VIRGINIA.GOV

919 East Main Street Suite 2101 Richmond, VA 23219