Maryland
STATE DEPARTMENT OF EDUCATION

Career and Technical Education: Comprehensive Local Needs Assessment

A Systemic Review Guidebook for Postsecondary Schools

Anne Arundel Community College

Office of College and Career Pathways

2024 - 2026

MARYLAND STATE DEPARTMENT OF EDUCATION

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1.0	February 2024	Initial Document
2.0	April 2024	Modified data tables in Activity B.1

Purpose

The federal Strengthening Career and Technical Education for the 21st Century Act (Perkins V), provides funding to support educators in developing the technical and employability skills and academic knowledge of secondary and postsecondary education students enrolling in career and technical education (CTE) programming.

Perkins V requires that grant recipients complete a Comprehensive Local Needs Assessment (CLNA) every other year to identify needs or gaps that should be addressed to strengthen the delivery of high-quality CTE programming.

The Maryland State Department of Education (MSDE) has created this document to assist you in conducting your CLNA. Information contained within it also will help you to align your improvement efforts with the College and Career Readiness Pillar contained in the Blueprint for Maryland's Future. Key action steps include assessing the alignment of CTE programs of study (POS) to labor market needs; reviewing student participation and performance in CTE coursework; evaluating site progress in making CTE offerings accessible to students; and considering efforts to recruit, train, and retain CTE instructors.

Results from this CLNA should be incorporated into your Perkins V Local Application, which details how you plan to use federal funds to improve CTE instruction and expand equitable student access to quality programs.

The Comprehensive Local Needs Assessment and the Local Application will be reviewed and approved on a rolling basis, and must be fully completed by the Community College, negotiated (CC and MSDE), and approved by the State Director of Career and Technical Education or their designee prior to July 1st of each year.

If you have questions about how to use this guide, please contact your designated Postsecondary Program Coordinator in the Office of College and Career Pathways.

Instructions

Conducting this needs assessment will take several months to complete and must precede the creation of your 2024-25 Perkins V Local Application.

This guide provides a framework to help you investigate the status of your CTE programming and identify areas for improvement. It is organized into six sections:

- Guiding Principles
- Assembling a Stakeholder Team
- Component A: Labor Market Alignment
- Component B: Student Participation and Persistence
- Component C: Program Performance
- Component D: Professional Development

While you may choose to cover topics in any order, you should begin by assembling a stakeholder team to inform your effort. This group must include representatives from the stakeholder groups that are identified in the Perkins V legislation.

You may complete this document online or electronically by typing directly into the provided fillable fields. Alternatively, you may print out a copy of this form and enter information by hand. Do not alter or remove sections. Those choosing to complete the document offline should upload a completed copy using SharePoint.

Guiding Principles and Logic Model

OVERVIEW

MSDE has identified a set of guiding principles to inform the creation of CTE programming. It includes the expectation that all learners should have access to high-quality CTE coursework that:

- aligns to high-skill, high-wage, in-demand careers,
- leads to industry-recognized and/or postsecondary credentials that supports entrance or advancement in a specific career cluster, and
- offers career-based learning experiences (e.g., work-based learning, apprenticeship) that require the application of academic and technical knowledge and skills in a work setting.

LOGIC MODEL

Despite the growing emphasis on CTE as a pivotal pathway for students in Maryland, there is a significant gap in the systematic evaluation of current CTE programs. Maryland's dedication to aligning educational experiences with the demands of the real-world labor market faces challenges:

1. Lack of Comprehensive Oversight: There isn't a unified method to holistically assess the state's CTE programming capacity. This absence has led to disparities among various student groups across CTE clusters, hindering equitable access to quality education.
2. Inefficient Funding Application Process: Potential CTE grantees in Maryland lack a structured Local Application process for Perkins V grant funds, affecting their ability to optimally leverage these resources for student outcomes.

The combined effect of these challenges puts Maryland's CTE programs at risk of not fully aligning with the Perkins V requirements and, more importantly, not meeting the evolving needs of students and the labor market. Consequently, there is an urgent need for a systematic approach to bridge these gaps, ensuring the delivery of equitable, high-quality career and technical training that truly mirrors labor market demands.

Resources	Strategies	Outputs	Short-Term Outcomes	Long-Term Outcomes	Impacts
Tangible: Funding from Perkins V	Develop a CLNA	Comprehensive report detailing current state of CTE programs	Identification of gaps and disparities in CTE programs	Enhanced quality and inclusivity of CTE programs	A workforce better prepared for Maryland's labor market demands
Tangible: Labor Market Information (LMI) Data	Analyze LMI to align CTE programs with labor market demands	List of high-demand sectors and occupations in Maryland	CTE curriculum adjustments based on labor market needs	Improved alignment of CTE tracks with workforce demands	Higher employment rates for CTE program graduates
Tangible: Interview and Focus Group	Conduct interviews and focus groups with stakeholders	Collection of feedback and insights from stakeholder groups	Immediate feedback loop established with stakeholders	Strengthened collaboration and partnerships	Enhanced stakeholder trust and investment in CTE programs
Intangible: Expertise in CTE Programmin g	Design a structured Local Application process for Perkins V funding	Guideline document for potential CTE grantees	Streamlined application process for Perkins V funding	Increased number of high-quality grant applications, earlier in the process	Optimal leverage of grant funds for improved student outcomes
Intangible: Stakeholder Relationships	Engage regularly with stakeholders for continuous feedback	Periodic stakeholder engagement sessions	Fostered sense of community ownership and involvement	Stronger community ties and support for CTE programs	CTE programs that resonate more deeply with community needs
Intangible: Knowledge of federal and state education guidelines	Ensure CTE programs align with Perkins V, the Blueprint for Maryland's Future, and other relevant guidelines	Regular compliance checks and reports	Immediate course correction when misalignment s are found	Consistent alignment with state and federal guidelines	Sustained funding and support for CTE programs due to compliance

INTERPRETATION

1. **IF** we intentionally and strategically allocate Perkins funding in the planning process, **THEN** we can develop a CLNA leading to a comprehensive report that identifies gaps in the CTE programs, ultimately enhancing the quality and inclusivity of CTE programs and preparing the workforce better for Maryland's labor market demands.
2. **IF** we utilize LMI data, **THEN** we can better align CTE programs with current labor market demands, leading to adjustments in the CTE curriculum, improving the alignment of CTE tracks with workforce demands, and resulting in higher employment rates for CTE program graduates.
3. **IF** we employ interview and focus groups effectively, **THEN** we can gather valuable feedback from stakeholders, establishing an immediate feedback loop, strengthening collaboration, and enhancing stakeholder trust and investment in CTE programs.
4. **IF** we leverage our expertise in CTE programming, **THEN** we can design a structured Local Application process for Perkins V funding, streamlining the application process, increasing the number of successful grant applications, and optimizing the use of grant funds for improved student outcomes.
5. **IF** we nurture and maintain stakeholder relationships, **THEN** we can engage more deeply and regularly for feedback, fostering a sense of community ownership, strengthening community ties, and creating CTE programs that resonate more deeply with community needs.
6. **IF** we stay updated on federal and state education guidelines, **THEN** we can ensure consistent alignment of CTE programs with these guidelines, leading to immediate course corrections when needed, sustained alignment, and thereby securing sustained funding and support for CTE programs

PROGRAM DESIGN

All CTE programming in Maryland must be delivered through Programs of Study (POS) developed by the state or a local school system. To be considered “state approved,” each program of study must meet these criteria:

- Strengthens the academic, career, and technical skills of students to prepare them for careers and further education.
- Incorporates input from diverse stakeholder groups, including industry and postsecondary partners
- Fits within one of 10 state-recognized career clusters that help students learn about their work options so that they may make informed career decisions.
- Includes opportunities for students to earn industry or postsecondary credentials and participate in career-based learning experiences.
- Prepares students for both college and careers through the completion of a planned sequence of coursework that blends academic, technical, and workplace skills.
- Incorporates a coherent set of academic, employability, and technical skills based on national and state standards that offer students a competitive advantage in the workplace.
- Offers multiple options to prepare students for entry into careers and further education through articulation agreements, supervised career-based learning experiences (e.g., work-based learning, internship, apprenticeship, etc.), and/or industry-mentored or capstone projects.
- Is based on enrollment and outcome data to inform program improvement and increase student performance.

Refer to these criteria as you conduct your CLNA to ensure your programming is rigorous and of uniformly high quality.

STUDENT ENGAGEMENT

A CTE POS includes a course sequence from grades nine through 12 and two or more years of postsecondary education courses. A student may meet the following thresholds of engagement:

Participant — Student completing not less than one credit in a MSDE approved CTE POS.

Concentrator — Students who have earned at least 12 credits in a CTE POS or completed such a program if the program encompasses fewer than 12 credits or the equivalent in total in a MSDE approved CTE POS.

Completer — Student who meets all requirements in a state approved CTE POS.

PROGRAM DELIVERY

Local school systems must meet **Size, Scope, and Quality** criteria to qualify for federal funding. Detailed information on these and additional expectations relating to CTE programming can be found in Maryland's Policies & Procedures for the Development & Continuous Improvement of Career and Technical Education Programs of Study.

Any program that fails to meet all the following criteria will need to be brought into compliance or removed from your program approval request, invalidating it for Perkins V funding. While you are not expected to develop plans to address deficiencies as part of the CLNA process, you are encouraged to assess each CTE POS against these criteria to help prepare for developing your local application.

SIZE
At least two state-approved CTE POSs are offered in recognized clusters.
Each POS consists of a coordinated, non-duplicative sequence of academic and technical coursework comprising at least 3 credits.
Each CTE concentrator-level course (typically the 3rd in a program) has a minimum of 10 concentrators over a 4-year period. If not, evidence must be offered of continued progress toward meeting this requirement.
Each POS has the required number of staff, availability of equipment, and student access to facilities.

SCOPE
Curricula are aligned to state-approved industry standards that allow students to earn recognized credentials, certifications, licenses, college credit, or degrees
Curricula offer a progression from secondary to postsecondary education and/or employment (including attainment of an industry-recognized credential or apprenticeship), and from community college to bachelor's degree programs
Curricula allow students to learn and demonstrate academic, technical, and employability skills
Curricula include differentiated supports and modifications to meet the needs of diverse learners

SCOPE
Each CTE student has a written career and academic plan in place that includes the: • required courses to complete a POS and graduate • required assessments to earn a certification, license, credential, or degree • required academic assessments to graduate • timeline to take courses, assessments, and complete career-based learning experiences.
All students, regardless of race, color, national origin, sex, or disability, have equitable access to high-quality CTE programs as required by Code of Maryland Regulation 13A.04.02.04
Approved POSs are guided by Local Advisory Councils and Program Advisory Committees according to the CTE Local Advisory Council and Program Advisory Committee Policies and Procedures (COMAR EA Title 21. Sec.101)
All CTE POS adhere to CTE Development Standards, which are required by Code of Maryland Regulations 13A.04.02.03
All programs meet the definitions for high-skill, high-wage, in-demand occupations

QUALITY
The site achieves or consistently makes progress towards local targets established for state and federal core indicators of performance
POS are delivered by instructors who meet state requirements to teach content at the secondary level
CTE POS are delivered by instructors who earned a minimum of effective on their teacher evaluation as defined by Code of Maryland Regulation 13A.07.09 within three years
Each CTE POS meets all the requirements of the MSDE evaluation criteria found in the Policies and Procedures for the Development and Continuous Improvement of CTE Programs of Study (page 45).
All students, including students in special populations, are offered the opportunity to: • Participate in at least one career-based learning experience (e.g., work-based learning, internship, apprenticeship, etc.) • Earn college credit and/or industry credentials • Participate in CTSOs
Professional learning opportunities, informed by data, are provided for administrators, instructors, faculty, counselors and support personnel to improve student learning outcomes. All secondary professional learning must be guided by the Maryland-endorsed National Learning Standards
Local and state annual data-reporting requirements are met, and reviews conducted of all annual Program Quality Index reports to inform improvement
Human resources are included in the recruitment process to ensure a diverse CTE teacher and member candidate pool
Metrics are used to ensure that CTE teacher and faculty member recruitment strategies are successful
Teacher retention rates are reviewed annually, for the most recent 3 years, with data used to identify the top three contributing factors to CTE teacher and faculty member turnover

Assembling a Stakeholder Team

Assemble a diverse stakeholder team to assist you in conducting your CLNA. Representation in the listed categories is required by federal statute, except where indicated. While Perkins V requires more than one representative for each group (with an exception for CTE coordinators and data analysts), it is permissible for one person to fulfill up to two roles.

STAKEHOLDER TEAM COORDINATOR

[This is the individual responsible for planning and holding stakeholder meetings and completing CLNA]

Name	Kathy Bolton
Organization	Anne Arundel Community College
Title	Special Assistant to the Provost/VP for Learning
Email	kebolton@aacc.edu

STAKEHOLDER TEAM MEMBERS

When Selecting Stakeholders, consider:

- Recruit individuals who are knowledgeable about CTE at your site and influential in the field.
- Ensure that members understand the time commitment and can attend all scheduled meetings.
- Perkins V requires *more than one representative for each group* (with an exception for the coordinators and data analyst). Members may not represent more than two stakeholder groups.
- If you are unable to recruit a member to fulfil a required role you should keep a record of your outreach efforts to demonstrate you acted in good faith.

Stakeholder Team Responsibilities

- Review Maryland Department of Labor employment and projections data, college student participation and performance data, and educator support efforts to identify priority areas for improvement.
- Ensure that program offerings are aligned to local, regional, and/or state employment priorities.
- Help to communicate the importance of delivering high-quality CTE POS in your site and champion local efforts to achieve improvement goals.
- Meet on a quarterly basis to track your progress in improving CTE programming and make annual updates to this needs assessment.

Note that stakeholder team meetings may be held in person, virtually, or using a hybrid approach. If scheduling conflicts make holding a full team meeting impractical, stakeholders may meet in subgroups to review data and consider strategies to strengthen programming. Ultimately, all stakeholders should contribute to identifying challenges and formulating solutions, and publicly support your findings.

Stakeholder Team Roster

SECONDARY FEEDER SCHOOLS

Role	Name	Title	Affiliation
Administration (e.g., principal, assistant principal)	Ryan Sackett	Coordinator, Career & Technical Education	AACPS
	Tamara Bauer	Principal, CAT-South	AACPS
	Joseph Rose	Principal, CAT-North	AACPS
Professional career or academic counselor	Diane Bennett	Transition Advisor	AACC
Instructors	Jack Heinz	Teacher Specialist – Technology Education	AACPS
	Amy Baer	Teacher Specialist – Family & Consumer Services	AACPS
Instructional Support	Gregory Kalberer	Special Educator	AACPS
Student	Leah Sawyer	Student	AACPS

POSTSECONDARY

Role	Name	Title	Affiliation
Administration (e.g., dean, division chair)	Dr. Tanya Millner	Provost/VP for Learning	AACC
	Kathy Bolton	Special Assistant to the Provost/VP for Learning	AACC
	Karen Cook	Dean, School of Business & Law	AACC
Faculty	Elizabeth Appel	Faculty & Dean, Health Sciences	AACC
	Dr. Lance Bowen	Faculty & Dean, Science, Technology & Education	AACC

WORKFORCE

Role	Name	Title	Affiliation
Local Workforce Development board member	Sandy Jones	Dean of Continuing Education & Workforce Development	AACC
	H. Walter Townshend	Past President	Baltimore Washington Corridor Chamber of Commerce
*Regional Economic Development organization member	Kirkland Murray	President & CEO	Anne Arundel Workforce Development Corp.
	Amy Gowan	President & CEO	Anne Arundel Economic Development Corp.
Local business & industry representative	Kenneth Crane	Deputy Chief for Learning & Development	National Security Agency
	Edward Evans	Director, Diversity, Equity & Inclusion	Live! Casino & Hotel Maryland
	Troy Green	Director, Institutional Partnerships & Strategic Sourcing	Luminis Health/AAMC
	Kristen Pironis	Executive Director	Visit Annapolis & Anne Arundel County

OTHER

Role	Name	Title	Affiliation
Parent or caretaker	Sara Eger	Director, Instructional Pathways & Partnerships – Secondary	AACC
Representative of Special Populations	Dana Kieran	Director, Disability Support Services	AACC
Out-of-School youth / unhoused youth / corrections	Michele Savage	Correctional Education & Special Populations	AACC

* Not required under Perkins V but recommended to include.

Component A: Labor Market Alignment

OVERVIEW

Career programming in Maryland must address the economic and workforce development needs of the state and align to high-skill, high-wage, and/or in-demand (HS/HW/ID) careers. These are defined as:

High-Skill — Careers that: (1) require previous work-related skills, knowledge, or experience of one or more years; (2) have a Specific Vocational Preparation (SVP) rating of at least six as defined by O*Net; (3) require state or federal licensing or industry-recognized certification; or (4). require a recognized postsecondary credential or degree.

High-Wage — Careers that exceed the state average annual wage of $69,750 in 2022.

In-Demand — Careers with a growth rate over ten years of at least 7% or a two-year occupational projected growth of 2.5%.

The Division of Career and College Readiness has evaluated all secondary and postsecondary State and Local approved POS against these HS/HW/ID criteria. Ideally, your CTE POS will meet all three of the criteria, or at least one to qualify for funding. You may access additional information on these programs at the Maryland CTE Data website. The Maryland Department of Labor has also developed Long Term Occupational Projections thru 2030, which can help you to identify high demand careers and the education and job training necessary to secure them.

ACTIVITY A.1 : TAKING STOCK

The following table details the CTE POS offered at your college in the 2022-23 school year, their alignment with high-skill, high-wage, and in-demand careers, and the relative proportion of students concentrating in each area. Although it is not *required* that each POS meet the criteria for high-skill, high-wage, *and* in-demand, it should be the goal of each POS to do so.

***Note**: Prior to sharing this table with your stakeholder team, you will need to suppress numbers and percentages in cell that do not include the minimum number of students required to protect student confidentiality. Maryland state policy is to suppress data for cells or percentages that are based on fewer than 35 students. Please consult your college policies to determine which data cells should be suppressed and how this information should be communicated (e.g., by entering 'LOW N' or '<35*

Program	HS	HW	ID	Number of CTE Participants 2022-23	% of all CTE Participants 2022-23
Accounting and Business Management	Y	Y	Y	116	2.37%
Alcohol/Drug Abuse Counseling	Y	Y	Y	156	3.18%
Architectural Drafting & Architectural CAD/CADD	Y	Y	Y	229	0.41%
Business Administration and Management	Y	Y	Y	689	4.67%
College Maryland Apprenticeship Program	Y	Y	Y	20	14.04%
Communications Techno/Technic & Support Services	Y	Y	Y	133	2.71%
Computer & Information Systems Security	Y	Y	Y	442	9.02%
Computer and Information Sciences, Other	Y	Y	Y	12	0.24%
Computer Software and Media Applications, Other	Y	Y	Y	40	0.82%
Computer Systems Networking & Telecomm	Y	Y	Y	111	2.27%
Construction Management	Y	Y	Y	38	0.78%
Cyber/Computer Forensics and Counterterrorism.	Y	Y	Y	26	0.53%
Dental Assistant	Y	Y	Y	2	0.04%
Education, Other	Y	Y	Y	122	2.49%
Electrical, Electronic and Communications Engineering Technology/Technician	Y	Y	Y	34	0.69%
Electrocardiograph Tech./Technician	Y	Y	Y	7	0.14%
Emergency Medical Tech./Technician	Y	Y	Y	142	2.90%
Enterprise Management and Operation, General	Y	Y	Y	118	2.41%
Film-Video Making/Cinematography and Production	Y	Y	Y	9	0.18%
Food Systems Administration	Y	Y	Y	25	0.51%
Forensic Tech./Technician	Y	Y	Y	108	2.20%
Graphic Design	Y	Y	Y	122	2.49%
Health and Physical Education, General	Y	Y	Y	26	0.53%
Health Professions and Related Sciences, Other	Y	Y	Y	5	0.10%
Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	Y	Y	Y	98	2.00%
Horticulture Services Operations and Management,	Y	Y	Y	18	0.37%
Hotel/Motel Administration Management	Y	Y	Y	5	0.10%
Interior Design	Y	Y	Y	36	0.73%
Law Enforcement/Police Science	Y	Y	Y	229	4.67%
Legal Assistant/Paralegal	Y	Y	Y	181	3.69%
Licensed Practical Nursing	Y	Y	Y	74	1.51%
Management Information Systems	Y	Y	Y	148	3.02%
Massage Therapy/Therapeutic Massage	Y	Y	Y	104	2.12%
Mechatronics, Robotics, and Automation Engineering	Y	Y	Y	71	1.45%
Med. Insurance Coding Specialist/Coder	Y	Y	Y	47	0.96%

Program	HS	HW	ID	Number of CTE Participants 2022-23	% of all CTE Participants 2022-23
Medical Assistant	Y	Y	Y	67	1.37%
Medical Laboratory Assistant	Y	Y	Y	8	0.16%
Medical Laboratory Technician	Y	Y	Y	37	0.76%
Medical Radiologic Tech./Technician	Y	Y	Y	30	0.61%
Mental Health Counseling/Counselor.	Y	Y	Y	4	0.08%
Mental Health Services, Other	Y	Y	Y	21	0.43%
Nursing Assistant/ Aide	Y	Y	Y	4	0.08%
Photography	Y	Y	Y	13	0.27%
Physical Therapy Assistant	Y	Y	Y	27	0.55%
Psychiatric/Mental Health Services Technician	Y	Y	Y	139	2.84%
Registered Nursing	Y	Y	Y	535	10.92%
Restaurant, Culinary, and Catering Management	Y	Y	Y	220	4.49%
Surgical/Operating Room Technician	Y	Y	Y	34	0.69%
Transportation/Transportation Mgmt.	Y	Y	Y	18	0.37%

Are you planning on adding any new or phasing out any existing POS in the upcoming year? If so, which CTE POS(s) are you considering and why?

Program/CIP Code	Adding or deleting	Rational for change
Cloud Computing	Adding	There is a growing interest and demand for skilled professionals in the cloud computing job market. The worldwide cloud computing industry was estimated at over $370 billion in 2023, and it is anticipated to grow at an annual rate of 15.7% from 2023 to 2030, exacerbating workforce shortages. As such, students and incumbent workers are seeking formal training in supporting cloud-based implementations and transitions of existing information systems.
Data Literacy	Deleting	Certificate has not populated as expected.
Mobile Device	Deleting	Certificate has not populated as expected.

ACTIVITY A.2: ASSESSING PROGRAM ALIGNMENT TO LABOR MARKET AND INDUSTRY NEEDS

Based on a review of the CTE POS data for high-skill, high-demand, and in-demand standards, rate each statement as a strength or area for improvement. Provide an explanation for any answer with which you identify as an 'area for improvement.

	Meets	Area for Improvement	Explanation
Our CTE stakeholders review workforce and economic data to assess current and anticipate future local employment needs in HS/HW/ID industries	X		
Processes are in place to identify and expand college level registered apprenticeship opportunities.	X		
Processes are in place to update or phase out CTE POS that do not align with HS/HW/ID industries	X		
A majority of our students are concentrating in POS aligned to HS/HW/ID industries	X		
Processes are in place to recruit business and industry stakeholders to participate on Program Advisory Committees	X		

ACTIVITY A.3: REFLECTION

Based on your responses in this component of the needs assessment guide, consider the following questions:

1. What is your rationale for offering programming that is not fully aligned with HS/HW/ID criteria you rated in Activity 1.1)?

Not applicable.

2. What are the top five priorities you will address in the coming year to update or phase out misaligned CTE programs and/or expand student participation in CTE programming aligned with HW/HS/ID careers?

    a. Continue to ensure program alignment with industry certifications/standards through a robust academic program review process and increased access to industry certifications.
    b. Increase student access to industry experts.
    c. Implement Cloud Computing Certificate Program.
    d. Discontinue Data Literacy program.
    e. Discontinue Mobile Device program.

Component B: Student Participation and Persistence

OVERVIEW

To ensure that all students have equitable access to CTE programming, MSDE encourages colleges to assess rates of student participation and persistence in CTE overall, as well as within each POS offered for the state approved Career Clusters. Enrollments also should be tracked using the disaggregates for student gender, race-ethnicity, and special population status detailed in Perkins V.

ACTIVITY B.1: TAKING STOCK

The following table asks you to enter the number and percentage of 2023 graduates statewide and in your college who participated in CTE coursework and persisted to achieve concentrator status in CTE programming, disaggregated by selected student demographics.

Please use the disaggregated 2023 statewide graduate data and postsecondary heat maps, provided by MSDE, to fill in the requested information. You may contact staff at MSDE if you have questions about the data to be entered.

Once you have entered the data, review the information to determine whether there are any concerning gaps in student participation and/or persistence. Note that small numbers of students may have large impacts on your participation and concentrator status rates; consequently, use care in interpreting data with cell sizes less than 10 students.

> ***Note**: Prior to sharing this table with your stakeholder team, you will need to suppress numbers and percentages in cell that do not include the minimum number of students required to protect student confidentiality. Maryland state policy is to suppress data for cells or percentages that are based on fewer than 35 students. Please consult your college policies to determine which data cells should be suppressed and how this information should be communicated (e.g., by entering 'LOW N' or '<35*

Student Group	2023 Graduates Statewide				2023 Graduates in Your College			
	Number	Percent	Percent participating in CTE	Percent of participants who achieved concentrator status	Number	Percent	Percent participating in CTE	Percent of participants who achieved concentrator status
All 2023 Graduates	20,213	100			2,174	100	62.9	100
Gender								
Male	6,157	30.46			906	41.7	42.1	100
Female	14,056	69.54			1,268	58.3	57.9	100
Race-ethnicity								
American Indian	77	0.38			5	0.2	0.15	100
Asian	1,502	7.43			104	4.8	3.95	100
Black	5,129	25.37			300	13.8	15.65	100
Hispanic	2,127	10.52			193	8.9	8.49	100
Multi-race	785	3.88			135	6.2	5.49	100
White	9,153	45.28			1,263	58.1	58.60	100
Non-Resident Alien					44	2.0	1.61	100
Unreported					130	5.9	5.93	100
Special Populations								
Economically disadvantaged						17.0	18.2	100
English learners						3.0	4.0	100
Individuals with disabilities						7.0	7.9	100
Nontraditional fields						17.0	20.1	100
Single parents						9.0	10.8	100
Out of workforce						N/A	N/A	N/A
Unhoused Individuals						<1.0	<1.0	100
Youth in foster care						<1.0	<1.0	100
Youth with parent in military						4.0	1.9	100
Migrant students						N/A	N/A	N/A

Note that since special population status is not mutually exclusive (i.e., a student may belong to more than one category), these data may not sum to 100%.

Activity B.2: ASSESSING YOUR PROGRAM

Based on a review of the overall CTE program data—relative to the state and across student groups—rate each statement as a strength or area for improvement. Provide an explanation for any answer with which you identify as an 'area for improvement.'

	Meets	Area for Improvement	Explanation
Our college ensures all students—irrespective of gender, race, or special population status—are provided unbiased, inclusive, and non-discriminatory information about CTE courses and POS	X		
Our college has processes in place to recruit students traditionally underrepresented in CTE to improve diversity in CTE POS	X		
Processes are in place to ensure that students traditionally underrepresented in CTE have options to enroll in CTE POS	X		
Processes are in place to ensure that students traditionally underrepresented in CTE persist in CTE POS once enrolled	X		
Processes are in place to ensure that all eligible students have equitable access to career-based learning experiences	X		
Career guidance and advisement services are provided to student prior to enrolling in a CTE POS	X		
All students have access to career planning and support services to help them successfully transition to advanced education and/or the workforce	X		

ACTIVITY B.3: REFLECTION

Based on your review of your data and responses in Activity B.2, consider the following questions:

1. Are there any student groups in your college that have concerning gaps in their CTE participation or persistence rates? If so, which groups are underperforming?

   In the aggregate, CTE persistence rates mirror those of all 2023 College graduates.

2. What are the top five priorities you will address in the coming year to expand student participation in CTE programming and reduce participation and/or persistence gaps among students? [*Note: At least one priority area you identify should address the needs of gender, race-ethnicity, or special population groups.]*

   a. Increase the number of CTE concentrators, with targeted outreach to special populations.
   b. Increase access to tutors with specialized subject matter expertise in CTE courses/programs, with targeted outreach to underrepresented students.
   c. Ensure all students utilize program planners to track progress toward completion.
   d. Ensure faculty utilize the Course Success Referral System to make referrals as appropriate to student supports services.
   e. Expand intentional analysis of equity data and use of high-impact practices in the comprehensive academic program review process.

ACTIVITY B.4: CAREER CLUSTER PARTICIPATION AND PERSISTENCE

Student participation and persistence rates may differ across Career Clusters. The following table asks you to enter the number and percentage of 2023 college graduates in your college who participated in CTE coursework and persisted to achieve concentrator status a given Career Cluster, disaggregated by selected student demographics. Create a separate table for each CTE Career Cluster offered.

Work with your college data team to find the requested information. You may contact staff at MSDE if you have questions about the data to be entered.

***Note**: Prior to sharing this table with your stakeholder team, you will need to suppress numbers and percentages in cell that do not include the minimum number of students required to protect student confidentiality. Maryland state policy is to suppress data for cells or percentages that are based on fewer than 35 students. Please consult your college policies to determine which data cells should be suppressed and how this information should be communicated (e.g., by entering 'LOW N' or '<35*

Career Cluster Name: Arts, Media, and Communication

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
GRAPHIC DESIGN	Associate Degree	9
VISUAL ARTS PROFESSIONAL	Associate Degree	10
ARCHITECHTURE ILLUSTRATION	Lower Division Certificate	11
ARCHITECTURE AND INTERIOR DESIGN	Lower Division Certificate	6
GAME DEVELOPMENT	Lower Division Certificate	6
GRAPHIC DESIGN	Lower Division Certificate	9
PHOTOGRAPHY	Lower Division Certificate	5

Career Cluster Name: Business Management and Finance

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
BUSINESS MGMT	Associate Degree	66
COMPUTER SCIENCE, DATABASE MNGT SYSTEMS	Associate Degree	13
ENTREPRENEURSHIP	Associate Degree	6
BUSINESS MGMT	Lower Division Certificate	156
CONSTRUCTION MANAGEMENT	Lower Division Certificate	3
ENTREPRENEURSHIP	Lower Division Certificate	9
FINANCIAL ACCOUNTING	Lower Division Certificate	7
MEDICAL CODING	Lower Division Certificate	6
PROFESSIONAL BOOKKEEPER	Lower Division Certificate	6
RETAIL MANAGEMENT	Lower Division Certificate	4

Career Cluster Name: Construction and Development

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
ARCHITECTURE AND INTERIOR DESIGN	Associate Degree	39
CONSTRUCTION MANAGEMENT	Associate Degree	4
LANDSCAPE ARCHITECTURE DESIGN	Associate Degree	3
ARCHITECTURE CAD	Lower Division Certificate	5
ARCHITECTURE AND INTERIOR DESIGN	Lower Division Certificate	6

Career Cluster Name: Consumer Services, Hospitality, and Tourism

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
HOTEL/RESTAURANT MANAGEMENT	Associate Degree	30
EVENT PLANNING & CATERING	Lower Division Certificate	5
HOTEL/LODGING MANAGEMENT	Lower Division Certificate	7
HOTEL/RESTAURANT MANAGEMENT	Lower Division Certificate	9
PERSONAL TRAINER	Lower Division Certificate	5
BAKING AND PASTRY ARTS	Lower Division Certificate	28

Career Cluster Name: Environmental, Agriculture, and Natural Resources

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
LANDSCAPE ARCHITECTURE DESIGN	Lower Division Certificate	4

Career Cluster Name: Health and Biosciences

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
EMERGENCY MEDICAL TECH	Associate Degree	13
MASSAGE THERAPY	Associate Degree	16
MEDICAL ASSISTING	Associate Degree	7
MEDICAL LABORATORY TECHNICIAN	Associate Degree	7
NURSING	Associate Degree	151
PHYSICAL THERAPY ASSISTANT	Associate Degree	11
RADIOLOGIC TECHNOLOGY	Associate Degree	10
SURGICAL TECHNOLOGY	Associate Degree	7
ELECTROCARDIO & INTRAVENS THERAPY TECH	Lower Division Certificate	6
EMERGENCY MEDICAL TECH	Lower Division Certificate	26
MASSAGE THERAPY	Lower Division Certificate	7
MEDICAL ASSISTING	Lower Division Certificate	15
MEDICAL LABORATORY ASSISTANT	Lower Division Certificate	7
PRACTICAL NURSING	Lower Division Certificate	23

Career Cluster Name: Human Resource Services

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
ADDICTION COUNSELING	Associate Degree	24
CYBERCRIME	Associate Degree	4
EMT PARAMEDIC	Associate Degree	13
HOMELAND SECURITY MANAGEMENT	Associate Degree	15
HUMAN SERVICES	Associate Degree	16
LAW ENFORCEMENT & CRIMINAL JUSTICE	Associate Degree	26
PARALEGAL STUDIES	Associate Degree	8
ADDICTION COUNSELING	Lower Division Certificate	26
Early Childhood Development	Lower Division Certificate	8
EMT PARAMEDIC	Lower Division Certificate	26
HUMAN SERVICES	Lower Division Certificate	14
INTELLIGENCE ANALYTICS	Lower Division Certificate	6
LAW ENFORCEMENT & CRIMINAL JUSTICE	Lower Division Certificate	17
LIFE AND ENGAGEMENT COACH	Lower Division Certificate	27
PARALEGAL STUDIES	Lower Division Certificate	14
POLICE ACADEMY	Lower Division Certificate	12

Career Cluster Name: Information Technology

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
COMPUTER NETWORK MANAGEMENT	Associate Degree	69
INFORMATION ASSURANCE & CYBERSECURITY	Associate Degree	22
CISCO CERTIFIED NETWORK ASSOC (CCNA)PREP	Lower Division Certificate	15
DIGITAL FORENSICS	Lower Division Certificate	26
HELP DESK SPECIALIST	Lower Division Certificate	5
MOBILE DEVICE APP DEVELOPMENT (Deleting)	Lower Division Certificate	1
NETWORK SECURITY	Lower Division Certificate	112
SERVER ADMINISTRATION & SECURITY	Lower Division Certificate	26
UNIX/LINUX SYS ADMINISTRATOR	Lower Division Certificate	35

Career Cluster Name: Manufacturing, Engineering, and Technology

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
ELECTRONIC ENGINEERING TECHNOLOGY	Associate Degree	6
MECHATRONICS TECHNOLOGY	Associate Degree	10
ELECTRONIC ENGINEERING TECHNOLOGY	Lower Division Certificate	6
MECHATRONICS TECHNOLOGY	Lower Division Certificate	11

Career Cluster Name: Transportation Technologies

PROGRAMS OF STUDY WITHIN CLUSTER:

PROGRAM	CREDENTIAL	2023 GRADUATES
TRNSPRTATION, LOGISTICS & CARGO SECURITY	Lower Division Certificate	9

CLUSTER-LEVEL DATA: ARTS, MEDIA, AND COMMUNICATION

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	3.44%	96.56%	100%
Gender				
Male	41.7	45.6	-3.9	
Female	58.3	54.4	3.9	
Race-ethnicity				
American Indian	0.2	0.6	-0.4	
Asian	4.8	1.2	3.6	
Black	13.8	15.9	-2.1	
Hispanic	8.9	12.0	-3.1	
Multi-race	6.2	7.0	-0.8	
White	58.1	57.5	0.6	
Non-Resident Alien	2.0	0	2.0	
Unreported	5.9	5.8	.1	
Special Populations				
Economically disadvantaged	17.0	17.6	-0.6	
English learners	3.0	2.3	0.7	
Individuals with disabilities	7.0	6.8	-0.2	
Nontraditional fields	17.0	15.8	1.2	
Single parents	9.0	1.8	7.2	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	<1.0	<1.0	
Youth in foster care	<1.0	0	<1.0	
Youth with parent in military	4.0	1.8	2.2	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: BUSINESS MANAGEMENT AND FINANCE

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	20.19%	79.81%	100%
Gender				
Male	41.7	38.6	3.1	
Female	58.3	61.4	-3.1	
Race-ethnicity				
American Indian	0.2	0.5	-0.3	
Asian	4.8	3.3	1.5	
Black	13.8	19.4	-5.6	
Hispanic	8.9	10.4	-1.5	
Multi-race	6.2	5.0	1.2	
White	58.1	55.0	3.1	
Non-Resident Alien	2.0	0	2.0	
Unreported	5.9	6.4	-0.5	
Special Populations				
Economically disadvantaged	17.0	13.0	4.0	
English learners	3.0	2.6	0.4	
Individuals with disabilities	7.0	7.1	-0.1	
Nontraditional fields	17.0	16.5	0.5	
Single parents	9.0	9.2	-0.2	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	1.7	2.3	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: CONSTRUCTION AND DEVELOPMENT

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	4.17%	95.83%	100%
Gender				
Male	41.7	38.1	3.6	
Female	58.3	61.9	-3.6	
Race-ethnicity				
American Indian	0.2	0	0.2	
Asian	4.8	3.6	1.2	
Black	13.8	23.7	-9.9	
Hispanic	8.9	13.7	-4.8	
Multi-race	6.2	2.9	3.3	
White	58.1	51.1	7.0	
Non-Resident Alien	2.0	1.0	1.0	
Unreported	5.9	5.0	0.9	
Special Populations				
Economically disadvantaged	17.0	15.1	1.9	
English learners	3.0	5.0	-2.0	
Individuals with disabilities	7.0	5.8	1.2	
Nontraditional fields	17.0	61.9	-44.9	
Single parents	9.0	2.9	6.1	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0.7	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	2.9	1.1	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: CONSUMER SERVICES, HOSPITALITY, AND TOURISM

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	6.14%	93.86%	100%
Gender				
Male	41.7	39.0	2.7	
Female	58.3	61.0	-2.7	
Race-ethnicity				
American Indian	0.2	0	0.2	
Asian	4.8	4.9	-0.1	
Black	13.8	32.5	-18.7	
Hispanic	8.9	8.1	0.8	
Multi-race	6.2	4.1	2.1	
White	58.1	47.2	10.9	
Non-Resident Alien	2.0	0	2.0	
Unreported	5.9	3.3	2.6	
Special Populations				
Economically disadvantaged	17.0	20.3	-3.3	
English learners	3.0	2.4	0.6	
Individuals with disabilities	7.0	13.0	-6	
Nontraditional fields	17.0	24.3	-6.3	
Single parents	9.0	7.3	1.7	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	0	4.0	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: ENVIRONMENTAL, AGRICULTURE, AND TOURISM

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	.29%	99.71%	100%
Gender				
Male	41.7	75.0	-33.3	
Female	58.3	25.0	33.3	
Race-ethnicity				
American Indian	0.2	0	0.2	
Asian	4.8	0	4.8	
Black	13.8	25.0	-11.2	
Hispanic	8.9	25.0	-16.1	
Multi-race	6.2	25.0	-18.8	
White	58.1	25.0	33.1	
Non-Resident Alien	2.0	0	2.0	
Unreported	5.9	0	5.9	
Special Populations				
Economically disadvantaged	17.0	50.0	-33.0	
English learners	3.0	25.0	-22.0	
Individuals with disabilities	7.0	0	7.0	
Nontraditional fields	17.0	25.0	-8.0	
Single parents	9.0	25.0	-16.0	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	0	4	
Migrant students	N/A			

CLUSTER-LEVEL DATA: HEALTH AND BIOSCIENCES

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	21.29%	78.71%	100%
Gender				
Male	41.7	13.3	28.4	
Female	58.3	86.7	-28.4	
Race-ethnicity				
American Indian	0.2	0.3	-0.1	
Asian	4.8	4.8	0	
Black	13.8	21.6	-7.8	
Hispanic	8.9	10.3	-1.4	
Multi-race	6.2	5.2	1	
White	58.1	52.6	5.5	
Non-Resident Alien	2.0	1.0	1.0	
Unreported	5.9	3.7	2.2	
Special Populations				
Economically disadvantaged	17.0	21.1	-4.1	
English learners	3.0	4.3	-1.3	
Individuals with disabilities	7.0	13.6	-6.6	
Nontraditional fields	17.0	11.8	5.2	
Single parents	9.0	15.7	-6.7	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	2.1	2.7	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: HUMAN RESOURCE SERVICES

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	18.73%	81.27%	100%
Gender				
Male	41.7	44.1	-2.4	
Female	58.3	55.9	2.4	
Race-ethnicity				
American Indian	0.2	0.2	0	
Asian	4.8	2.4	2.4	
Black	13.8	17.9	-4.1	
Hispanic	8.9	9.5	-0.6	
Multi-race	6.2	3.7	2.5	
White	58.1	56.4	1.7	
Non-Resident Alien	2.0	1.0	1.0	
Unreported	5.9	8.9	-3.0	
Special Populations				
Economically disadvantaged	17.0	14.0	3.0	
English learners	3.0	0.9	2.1	
Individuals with disabilities	7.0	5.6		
Nontraditional fields	17.0	19.9	-2.9	
Single parents	9.0	7.1	1.9	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	2.4	1.6	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: INFORMATION TECHNOLOGY

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	22.68%	77.32%	100%
Gender				
Male	41.7	77.0	-35.3	
Female	58.3	23.0	35.3	
Race-ethnicity				
American Indian	0.2	0.3	-0.1	
Asian	4.8	5.9	-1.1	
Black	13.8	19.0	-5.2	
Hispanic	8.9	10.8	-1.9	
Multi-race	6.2	4.6	1.6	
White	58.1	52.5	5.6	
Non-Resident Alien	2.0	2.0	0	
Unreported	5.9	4.9	1.0	
Special Populations				
Economically disadvantaged	17.0	15.4	1.6	
English learners	3.0	3.3	-0.3	
Individuals with disabilities	7.0	8.2	-1.2	
Nontraditional fields	17.0	23.0	-6.0	
Single parents	9.0	4.9	4.1	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0.3	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	2.0	2.0	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: MANUFACTURING, ENGINEERING, AND TECHNOLOGY

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	2.41%	97.59%	100%
Gender				
Male	41.7	85.3	-43.6	
Female	58.3	14.7	43.6	
Race-ethnicity				
American Indian	0.2	0	0.2	
Asian	4.8	14.7	-9.9	
Black	13.8	11.8	2	
Hispanic	8.9	2.9	6.0	
Multi-race	6.2	8.8	-2.6	
White	58.1	55.9	2.2	
Non-Resident Alien	2.0	1.0	1.0	
Unreported	5.9	4.9	1.0	
Special Populations				
Economically disadvantaged	17.0	5.9	11.1	
English learners	3.0	7.8	-4.8	
Individuals with disabilities	7.0	8.8	-1.8	
Nontraditional fields	17.0	14.7	2.3	
Single parents	9.0	0.0	9.0	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	0	0	
Migrant students	N/A	N/A	N/A	

CLUSTER-LEVEL DATA: TRANSPORTATION TECHNOLOGIES

Student Group	Participation Rate			Persistence Rate
	2023 College Graduates (A)	2023 College graduates participating in this cluster (B)	Percentage difference (A-B)	2023 College graduates who participated in this cluster and achieved CTE concentrator status
All 2023 Graduates	100%	0.66%	99.34%	100%
Gender				
Male	41.7	72.7	-31	
Female	58.3	27.3	31	
Race-ethnicity				
American Indian	0.2	0	0.2	
Asian	4.8	0	4.8	
Black	13.8	22.7	-8.9	
Hispanic	8.9	18.2	-9.3	
Multi-race	6.2	0	6.2	
White	58.1	40.9	17.2	
Non-Resident Alien	2.0	4.0	-2.0	
Unreported	5.9	14.2	-8.3	
Special Populations				
Economically disadvantaged	17.0	4.5	12.5	
English learners	3.0	0	3.0	
Individuals with disabilities	7.0	0	7.0	
Nontraditional fields	17.0	22.7	-5.7	
Single parents	9.0	0	9.0	
Out of workforce	N/A	N/A	N/A	
Unhoused Individuals	<1.0	0	0	
Youth in foster care	<1.0	0	0	
Youth with parent in military	4.0	0	4.0	
Migrant students	N/A	N/A	N/A	

Based on your responses in this component of the needs assessment guide, consider the following questions:

1. Does it appear that students in your college are participating at rates equivalent to their representation in the population for this CTE cluster? If not, what factors might be affecting their decisions?

   Overall, the 2023 CTE graduate population aligned closely to the college's overall 2023 graduate population in gender, race/ethnicity, and special populations.

2. Does it appear that all students participating in this cluster are persisting at equivalent rates? If not, what factors might be affecting their decisions?

   Health and Biosciences Cluster: Men in this cluster are not persisting at equivalent rates to female students. Reasons for this can be influenced by many factors. Men in health careers may be facing stereotypes that question their suitability for jobs that are traditionally seen as "female" occupations. Men may perceive that they have fewer support networks compared to their female counterparts. Without adequate support, they may struggle to navigate the challenges of college and may be more likely to drop out. Men may also face personal responsibilities that can impact their ability to persist in college studies. Balancing college studies with work, family obligations, or financial issues may contribute to attrition rates.

   Manufacturing, Engineering, and Technology Cluster: Women in this cluster are not persisting at equivalent rates to male students. There are many possible factors as to why this may be the case. Stereotypes often portray STEM fields as "masculine" and reinforce the idea that women are not as suited for these disciplines. There is sometimes scarcity of visible female role models in STEM fields which can make it more challenging for women to see themselves succeeding in these careers. Stereotypes about gender may influence expectations of women potentially impacting their confidence and performance in STEM subjects. Balancing college studies with work, family obligations, or financial issues may contribute to attrition rates.

   The Environmental, Agricultural, and Natural Resources Cluster and the Transportation Technologies Cluster consist of small programs. With such a small sample, one individual represents a larger proportion of the total sample compared to a larger population. As a result, the characteristics, behaviors, or outcomes of any single student can disproportionately influence the overall aggregate outcomes, skewing the results in one direction or the other.

3. How might student participation and persistence in this cluster differ by program of study? Might there be some programs of study that are under- or over-performing the cluster average?

   Yes, there can be significant variation in performance across different programs of study. Each CTE program of study has unique characteristics, such as curriculum design, faculty expertise, resources, etc. which can influence performance. Programs aligned with high-demand industries may attract more motivated and academically successful students. Similarly, programs with desirable accreditations may attract higher-performing students. Variation in quality of instruction and access to hands-on learning experiences can also significantly impact student outcomes.

4. What are the top five priorities you will address in the coming year to expand student participation in CTE programming and reduce participation and/or persistence gaps among students? [*Note: At least one priority area you identify should address the needs of gender, race-ethnicity, or special population groups.]*
    a) Increase the number of CTE Concentrators, with emphasis on underrepresented special populations, including gender and race/ethnicity.
    b) Increase availability of specialized tutoring services targeted toward CTE students.
    c) Develop recruitment programs targeted to underrepresented and underserved student populations.
    d) Provide professional development opportunities for faculty to better support an increasingly diverse student population.
    e) Expand intentional analysis of equity data and use of high-impact practices in the comprehensive academic program review process.

Component C: Program Performance

Federal law requires that you collect data on the performance of CTE concentrators. The accountability indicators cover a range of outcomes to help you assess whether students are making educational progress, earning recognized postsecondary credentials, concentrating in programs that prepare individuals for non-traditional occupations. These include:

1P1: Postsecondary placement: The percentage of CTE concentrators who, during the second quarter after program completion, remain enrolled in postsecondary education, are in advanced training, military service, or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are placed or retained in employment.

2P1: Earned recognized postsecondary credential: The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion.

3P1: Non-traditional program concentration: The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.

To establish performance expectations, MSDE has set performance targets for each indicator based on an analysis of statewide data. All providers are expected to achieve the performance targets established for each indicator. Moreover, to ensure that all students make progress, you are expected to monitor performance on an annual basis.

In the following table, use your heatmap to fill in your college's performance on the federal measures. On the heatmap, cells highlighted in green indicate your college met or exceeded the statewide performance level; yellow indicates your college performance did not meet the performance level but was within 90% of the target; and red indicates that your college did not meet the performance level and was less than 90% of the target.

Colleges failing to achieve the state performance level are expected to develop a program improvement plan to bring them into compliance.

COLLEGE PERFORMANCE BY STUDENT GROUP

Federal Accountability Indicator 2023 Graduates			
	1P1	2P1	3P1
State Performance Target	71.33	44.4	24.85
College Performance	76	59	32
Gender			
Males	80	51	17
Females	74	63	41
Race-ethnicity			
American Indian	N/A	N/A	N/A
Asian	77	67	32
Black	77	55	36
Hispanic	85	47	35
Multi-race	70	55	31
White	75	62	30

SPECIAL POPULATIONS

Federal Accountability Indicator 2023 Graduates			
	1P1	2P1	3P1
State Performance Target	71.33	44.4	24.85
College Performance	76	59	32
Economically disadvantaged	81	62	34
English learners	88	46	31
Individuals with disabilities	78	69	25
Nontraditional fields	76	59	26
Single parents	N/A	N/A	32
Out of workforce	N/A	N/A	N/A
Homeless individuals	N/A	N/A	N/A
Youth in foster care	N/A	N/A	N/A
Youth with a parent in active military	100	100	27
Migrant students	N/A	N/A	N/A

* Data for the 3S1 indicator reflect outcomes for 2022 graduates 6-months following their graduation.

ACTIVITY C.1: ASSESSING PROGRAM PERFORMANCE

	List
Looking at *overall performance*, on which indicators are you substantially underperforming* the college performance target?	N/A
Looking at *overall performance*, on which indicators are you substantially exceeding the college performance target?	N/A

* Substantially underperforming is defined as achieving an outcome that is less than 90% of the college performance target, and substantially over-performing is achieving an outcome that is more than 110% of the college performance target.

ACTIVITY C.2: DETERMINING ROOT CAUSES

1. For each indicator for which you are substantially underperforming the college performance target, identify the key factors that might affect student performance, including any disparities or gaps in performance by program. Ideally, these factors should be the primary drivers of the results that you see.

   In the aggregate, AACC exceeds all performance targets. When the performance data is disaggregated, only one demographic is below the target: 3P1 for males.

2. The data provided reflects the performance of all students within your college. Remember that aggregate data can hide considerable variation. As you think about strategies to improve performance, consider how program performance might differ within programs of study. Might some programs be performing above or below the site average?

   Yes, there can be significant variation in performance across different programs of study. Each CTE program of study has unique characteristics, such as curriculum design, faculty expertise, resources, etc. which can influence performance. Programs aligned with high-demand industries may attract more motivated and academically successful students. Similarly, programs with desirable accreditations may attract higher-performing students. Variation in quality of instruction and access to hand-on learning experiences can also significantly impact student outcomes.

3. Resource constraints may affect the activities you might undertake. What might be the most efficient and effective approach to making change (e.g., taking into consideration the relative size of your program enrollments?

   Making changes in current academic environments facing resource constraints requires prioritization of initiatives. Activities the college continues to undertake include data-driven decision making; targeted interventions focused on special populations; leveraging of existing resources; prioritization of high-impact initiatives; and an ongoing culture of continuous improvement where incremental changes are made over time based on feedback and evaluation.

4. What are the top five priorities you will address in the coming year to improve student performance outcomes on indicators on which you are substantially underperforming? [*Note: At least one priority area you identify should address the needs of gender, race-ethnicity, or special population groups.]*

   Note: As indicated above, AACC exceeded all performance outcome targets. When the performance data is disaggregated, only one demographic is below the target: 3P1 for males. Thus, the following priorities will help address male student outcomes.

   a) Increase student participation in work-based learning opportunities with targeted outreach to students in programs of study non-traditional to their gender (i.e. males in Health Sciences Cluster).
   b) Increase investment in modern equipment and technology to support hands-on learning and ensure that CTE labs are equipped to industry standards.
   c) Continue to enhance student support services targeted to CTE students.
   d) Enhance early alert systems to better identify and support at-risk students.
   e) Enhance feedback loop with students, faculty, and industry individual partners to continuously improve programs.

Component D: Recruiting, Developing, and Retraining CTE Educations

The quality of your CTE programming depends upon the skills of your workforce. This extends to all members of your educational team, including full-time faculty, part-time faculty, additional support staff available, and more. Ideally, faculty and staff should also be representative of the populations served and retained over time to promote program sustainability.

ACTIVITY D.1: REVIEW DATA ON CURRENT STAFF

Reviewing current staff demographics is critical to understanding where there are opportunities to strengthen staff skills and diversify your workforce.

Anne Arundel Community College Faculty/Staff Demographics			
Faculty / Staff demographic	Percentage of 2023 faculty / staff	Percentage of students participating in CTE programming 2023	5-year faculty / staff turnover rate (Percentage of faculty / staff who did not return for years 2020 thru 2023
			Full-time Faculty & Staff
Gender			
Male	38%	39%	20-23 Average Turnover Rate: 9.2% 2023 Rate decreased to 7.50%
Female	62%	61%	
Race-ethnicity			
American Indian	0.3%	<1%	0
Asian	4%	4%	4%
Black	16.8%	18%	26%
Hispanic	6.0%	10%	4%
Multi-race	1.3%	5%	2%
White	70.2%	56%	64%
Native Hawaiian/ Pacific Islander	0.1%	<1%	0
Unreported/ Non-Resident	1.3%	6%	0
Credential			
Properly Licensed	100%		
Granted Temporary Waiver	0%		

ACTIVITY D.2: ASSESS EDUCATOR SUPPORT OPPORTUNITIES

It's critical to create consistent opportunities that allow your faculty/staff to maintain licensure and grow within this field. Professional development is a key strategy for retention and ensuring a high-quality workforce.

Based on your knowledge of professional licensure requirements and the availability of content-specific professional development opportunities across clusters, rate the extent to which you strongly agree or disagree with each statement. Where applicable, please add an explanation for your assessment with examples.

	Strength	Area for Improvement	Explanation
Faculty/staff acquire content-specific professional development required to maintain licensure.	X		
Faculty/staff are aware of the requirements to maintain endorsement.	X		
Faculty/staff have equal access to content-specific professional development opportunities across industries.	X		
Data is collected on the effectiveness of professional development to ensure it meets the needs of educators.	X		

ACTIVITY 4.3: REFLECTION

Based on your responses in this section of the needs assessment guide, consider the following questions:

1. Does your faculty/staff demographic characteristics reflect the students they serve across programs of study?

   For 2023:

   - Hispanic faculty/staff (6%) are underrepresented in comparison to Hispanic students in CTE programming (10%).
   - White faculty/staff (70.2%) are overrepresented in comparison to White students in CTE programming (56%).

2. Are instructors adequately credentialed, including licenses, certifications, or endorsements for the courses they're teaching? If not, what mechanisms can be put in place to get them endorsed, or what recruitment efforts are necessary to attract properly credentialed instructors?

   Yes. AACC requires its faculty to have at least a master's degree. Relevant licensure and certifications are specific to each program area and accreditor requirements, if applicable. Compensation increases are offered as incentives toward continuing education.

3. To what extent does your institution offer regular, substantive content-specific professional development opportunities? Do all faculty/staff members have equal awareness of, and opportunities to participate in content-specific professional development opportunities, necessary to maintain their industry credentials and endorsements?

   Faculty complete a professional development plan annually related to college, school and departmental goals which includes a requirement for faculty to state a plan of how they intend to share acquired information with the college community. Professional growth opportunities include sabbaticals, participation in conventions, seminars, or conferences and inter-department meetings.

   AACC offers tuition reimbursement for faculty and staff. For many CTE faculty, continuing education is a requirement to maintain their license or credentials in the profession. Attendance at professional development training and workshops for industry certifications are paramount to ensuring programs are relevant. By maintaining and acquiring industry credentials, faculty demonstrate expertise and currency in their fields, as well as model best practices for their students. Continued support for professional development maintains faculty currency in rapidly changing industries.

4. What barriers exist to offering and participating in content-specific professional development?

   Barriers to offering and participating in professional development may include the cost and time commitment during busy semesters.

5. What are the top five priorities you might wish to address in the coming year to recruit, develop, and retain CTE instructors and improve their professional skills?
   a) Increase access to professional development opportunities for CTE faculty.
   b) Increase faculty retention by increasing access to professional development opportunities related to multi-language learners.
   c) Ensure faculty salaries and benefits are competitive for the region.
   d) Utilize targeted recruitment strategies such as partnerships with industry associations to reach a diverse array of faculty candidates.
   e) Ensure faculty have access to the latest teaching materials and technologies.

Next Steps

With the completion of the CLNA), you are now poised to embark on the crucial next phase of securing Perkins V funding. This stage involves translating the insights and findings from the CLNA into actionable and strategic plans.

UTILIZING CLNA ANALYSIS FOR LOCAL PERKINS APPLICATION S.M.A.R.T.I.E. GOAL SETTING

The first step for postsecondary schools is to use their CLNA analysis to formulate S.M.A.R.T.I.E. goals. These goals should be Specific, Measurable, Achievable, Relevant, Time-bound, Inclusive, and Equitable. The essence of this process is to ensure that the goals set for CTE programs are not only aligned with the identified needs and opportunities but are also focused on inclusivity and equity.

Postsecondary schools should look at areas highlighted in the CLNA, such as skill gaps, program areas needing enhancement, and disparities in student participation and success rates. From here, specific goals can be set. For example, if the CLNA indicated a gap in technology-related skills among students, a S.M.A.R.T.I.E. goal could be to increase enrollment in technology-focused CTE programs by 15% within the next two years while ensuring equitable access for all student groups.

CONNECTING GOALS TO AN ANNUAL BUDGET FOR PERKINS FUNDING

Once S.M.A.R.T.I.E. goals are established, postsecondary schools must then align these objectives with an annual budget for Perkins funding. This budgeting should be a reflective exercise, considering not just the cost of program enhancements but also the broader resources required to meet these goals. This includes faculty development, curriculum updates, equipment purchases, and any necessary infrastructure improvements.

For instance, if one of the goals is to enhance a manufacturing CTE program, the budget may include expenses for new machinery, professional development for educators to teach advanced manufacturing techniques, and outreach initiatives to increase program enrollment.

ENSURING ALIGNMENT WITH PERKINS REQUIREMENTS

Throughout this process, postsecondary schools need to ensure that their plans align with the requirements of the Perkins V Act. This means that the goals, strategies, and budgeted activities should contribute to developing more effective and equitable CTE programs, as stipulated by Perkins V.