

Career and Technical Equity Audit

2023

April 2023



ELEANOR
GRADE 11, SCPA



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Executive Summary

The Carl D. Perkins Career and Technical Education Act, first enacted in 1984, requires that career and technical education (CTE) programs be accessible and equitable to students, regardless of their race, ethnicity, gender, or socio-economic status. CTE courses must provide equal opportunities for all students to learn and acquire the skills that they need to excel in the workforce. The law emphasizes the relationships between secondary and postsecondary institutions and encourages partnerships that extend learning beyond the classroom. Through relationships with community businesses, CTE programs provide students with relevant, real-world experiences. Overall, the goal of the Perkins Act is to prepare students for high-skill, high-wage, and high-demand careers, while ensuring that all students have the opportunity to benefit from CTE learning experiences.

In recent years, CTE programs have gained popularity as national conversations about student loans and job preparation have challenged the idea that people must have a four-year degree to find a career. A study published in the American Education Research Journal tracked 10,000 students from 2002 through 2006. The study followed students from 10th grade through the first couple of years post-graduation. It found, “taking yearlong courses in career and technical education increases students’ chances of graduating from high school in four years, and decreases their chances of dropping out.” The study also found that “taking CTE courses in 11th and 12th grades increases students’ odds of graduating on time, and not dropping out, more so than taking those courses in 9th or 10th grades.” Discussion about the increasing importance of CTE has appeared in journals such as Education Week and Forbes. As a result, the focus on CTE has expanded nationally. The federal and state governments have responded with increased funding for career preparation programs and increased emphasis on CTE accountability measures.

As the Ohio Department of Education’s (ODE) new graduation requirements come into effect this year, CTE programs will become important not only for students to prepare for their post-secondary life but also for help with meeting graduation requirements. These programs are too important to our students not to give them significant focus. CPS offers career pathways that not only prepare students for careers in high demand in the region but also provide above-poverty wages. The work of this department has the potential to significantly reduce generational poverty in our city. The





clear advantages CTE programs offer students warrant serious attention to this program to create the strongest opportunities possible for students.

This audit will identify areas of success and need in Cincinnati Public Schools (CPS) programs. Through this process, we will share findings, and recommend possible next steps toward strengthening and expanding CPS career options for all students. This work will focus on finding areas of strength that can be replicated and areas where improvement is needed. By examining the current state of the program, school leaders, teachers, district staff, and community partners can find ways to work together to increase positive outcomes for students.

Results of this study show fewer students reach proficiency on course assessments at most high schools than desired. Low performance on course exams indicates a need for increased support from teachers. The data indicate a need for professional development in engagement and reading strategies to aid students who are still striving to master core content. The CTE department could also work with teachers to examine course assessments and credential exams to make strategic choices about pacing, lesson design, and possible interventions which could be utilized. Before the completion of the audit, the CTE department had already collaborated with the English Speakers of Other Languages (ESOL) department to provide professional learning options over the summer of 2023 to help teachers understand the needs of English language learners and how to provide scaffolding to help students achieve mastery.

While taking steps to improve achievement on CTE assessments, the CPS CTE department has worked to create partnerships with area businesses and institutions to provide students with on-the-job experiences not replicable in the classroom. Additionally, all CTE teachers have taken ownership of helping students earn 12 points for an industry credential, opening the path to graduation for many students who otherwise might not be eligible under new requirements. CTE teachers across the district know the importance of their courses to students for graduation. The strength of the CTE pathways in CPS is that the teachers are passionate about helping students succeed in their chosen career pathways post-graduation. By honoring the strengths the district staff, teachers, administrators, and community partners bring to this work, we will find innovative solutions to these challenges.





Needs Assessment

This section expands upon the importance of CTE programming, providing context for CTE's increased role in the graduation process. Given the potential CTE programs have to create a path to graduation for our students, the importance of student achievement within these programs has now risen to the forefront. This section provides student achievement data as reflected on the state assessment, the WebXam, as well as data on industry credentials. These data highlight the need to take action to improve instruction across programs.

Graduation Requirements

Ohio students graduating in 2023 are subject to new, more stringent graduation requirements. Students must meet requirements in three categories: course credits, competency, and readiness. To show competency, students can show proficiency in the English II and Algebra I end-of-course exams. If students cannot show competency through this path, there are three alternative options by which a student can show competency.

Course Completion

To meet the course completion requirements, students will satisfy Ohio's curriculum requirements and any additional local requirements. Students will complete the state minimum of 20 units, with specific units required in each content area. (Ohio 2023).

Demonstrating Competency

In addition to earning the required number of credits in core academic courses, students must demonstrate competency in the foundational areas of English language arts and mathematics or through alternative demonstrations, which could include College Credit Plus, career-focused activities, their ACT or SAT scores, or military enlistment. (Ohio 2023) The Ohio Department of Education, after gathering feedback from education stakeholders and business communities of Ohio, determined that "competency" would be set at a score of 684 for both the English language arts II and Algebra I tests. See Ohio Revised Code section 3301.0712(B)(10).





While CPS has taken steps to increase the number of students showing competency through math and English assessments, the number of students needing an alternative route to graduation is significant. The charts below indicate the number of students passing Algebra I and English II end-of-course assessments during SY 2022.

Alternative methods of showing competency

For students to demonstrate competency through passing a college credit plus course, students must earn credit in a non-remedial math or English course (for the subject area not passed). Students need to earn credit in each subject area not passed. For example, a student meeting the competency score on the English Language Arts II test, but not on the Algebra I test, would only need to earn College Credit Plus math credit. Similarly, to complete this alternative demonstration of competency, students must obtain a remediation-free score in the math or English areas on the ACT or SAT to demonstrate competency. To demonstrate competency in English II, a student must be remediation-free in the subjects of English and reading on the ACT or SAT. The current challenge inherent in these two options is that if students are unable to pass the end-of-course exams for these courses, there is not a high level of likelihood that they will earn credit in a college-level course or earn the required score on the ACT or SAT.

Students are also able to demonstrate competency through military enlistment, by showing evidence of enlistment in a branch of the armed forces to satisfy the enlistment criteria. All branches of service offer a Delayed Entry program, which allows current high school students to enlist and begin training after graduation. To show evidence of enlistment, a student will provide to the district or school a signed copy of the Department of Defense Form Enlistment/Reenlistment (DD Form 4) enlistment contract. After taking and achieving the required score on the ASVAB and completing the oath of enlistment into the Delayed Training Program, each recruit signs and is provided a copy of his or her Department Defense Form Enlistment/Reenlistment (DD Form 4) enlistment contract. This is the same for all branches of services.

Demonstrating competency through CTE programs

Students have an additional opportunity to show competency through participation in CTE programs. Students must complete two of the options from the below list of seven, at least one of which must be a foundational option:





Foundational Options:

1. Earn a cumulative score of proficient or higher on three or more WebXams in a single career pathway;
2. Earn a 12-point approved industry-recognized credential or group of credentials totaling 12 points in a single career field;
3. Complete a pre-apprenticeship program, which program should be recognized by the Ohio State Apprentice Council (OSAC), complete an OSAC registered apprenticeship in the student's chosen career field, or show evidence of acceptance into an OSAC registered apprenticeship program after high school if the program requires a student to be 18 years of age or older.
4. Obtain a state-issued license for practice in a vocation that requires an examination.

Supporting Options:

1. Complete a 250-hour work-based learning experience with evidence of positive evaluations;
2. Earn the workforce readiness score on WorkKeys*; or
3. Earn the OhioMeansJobs-Readiness Seal.

Demonstrating Readiness

Students will demonstrate readiness for their post-high school paths by earning two diploma seals that allow them to demonstrate important foundational and well-rounded academic and technical knowledge, professional skills, and leadership and reasoning skills.

In addition to fulfilling curriculum requirements and meeting the competency requirements listed above, students also must show they are prepared for their next steps after high school. State law created 12 diploma seals for students to demonstrate academic, technical, and professional readiness for careers, college, the military, or self-sustaining professions. Each seal allows students to demonstrate knowledge and skills essential for future success in their chosen post-high school paths. Students will demonstrate readiness by earning at least two diploma seals, one of which must be state-defined. Seals help students develop an array of critical skills that are valuable to them as they transition to the next steps after graduating high school. Schools should consider encouraging students to pursue seals that meet their





individual interests and skills. Graduation planning will be an important step in supporting students in earning their seals.

Ohio Means Job Readiness Seal

The Ohio Means Job Readiness seal requires high school students to demonstrate the professional skills required for success in the workplace. Students must work with at least three experienced and trusted mentors who validate the demonstration of these skills in school, work, or the community. (Ohio Revised Code 3313.6112)

Students will earn the OhioMeansJobs-Readiness Seal by satisfying each of the 14 professional skills

Drug-Free	Critical Thinking/Problem-solving
Reliability	Leadership
Work Ethic	Creativity/Innovation
Punctuality/Discipline	Oral and Written Communication
Teamwork/Collaboration	Digital Technology
Professionalism	Global/Intercultural Fluency
Learning Agility	Career Management

Industry-Recognized Credential Seal – General Requirements

An industry-recognized credential is a qualification of a specific set of competencies related to an industry or occupation. These credentials can take many different forms, including certificates, certifications, and licenses. (Ohio Revised Code Section 3313.6114(C)(1))

To earn Ohio's Industry-Recognized Credential Seal, students must do one of the following:

1. Earn a 12-point industry-recognized credential; or
2. Earn a group of credentials totaling 12 points in a career field





3. Obtain a state-issued license for a practice in a vocation that requires an examination

Potential Impact of CTE Programs

According to the Ohio CTPD report card the graduation rate for students participating in CTE was nearly 10% higher than students not participating in CTE programs even for the 2021-2022 student cohort who were not held to the new graduation requirements. The table below shows a comparison of the graduation rate for CTE students compared to their non-CTE peers for the 2021-2022 school year for both CPS and the state. It is notable that though the CPS graduation rate lags behind the state in the four-year graduation rate, CPS catches up with the state in the five-year graduation rate.

4 Year Graduation Rate				5 Year Graduation Rate			
CTE	All	Ohio CTE	Ohio II	CTE	All	Ohio CTE	Ohio All
86%	78.1%	95.6%	87%	96.3%	86.3%	98.1%	89%

ODE Report Cards: Cincinnati City and Cincinnati CTPD <https://reportcard.education.ohio.gov/>

The CTE department has worked diligently to prepare students for graduation. The number of students experiencing learning loss post-pandemic has amplified the impact that their efforts have made on the anticipated graduation rate for the 2022-2023 school year. Achievement on the WebXam, Ohio's assessment for proficiency in CTE courses has fallen short of expectations. As an immediate stop-gap measure, the CTE department put a plan in place to assist students in earning the National Incident Management System/Federal Emergency Management Agency (NIMS/FEMA). The NIMS/FEMA credential is one of the more accessible certifications and is one of the more accessible for students and instructors. When coupled with CPR and Stop the Bleed courses, these credentials equate to the 12 points students require to show competency through credentialing. The NIMS/FEMA industry-recognized credentials in Ohio are certifications that demonstrate a person's knowledge and skills in emergency management, response, and recovery.

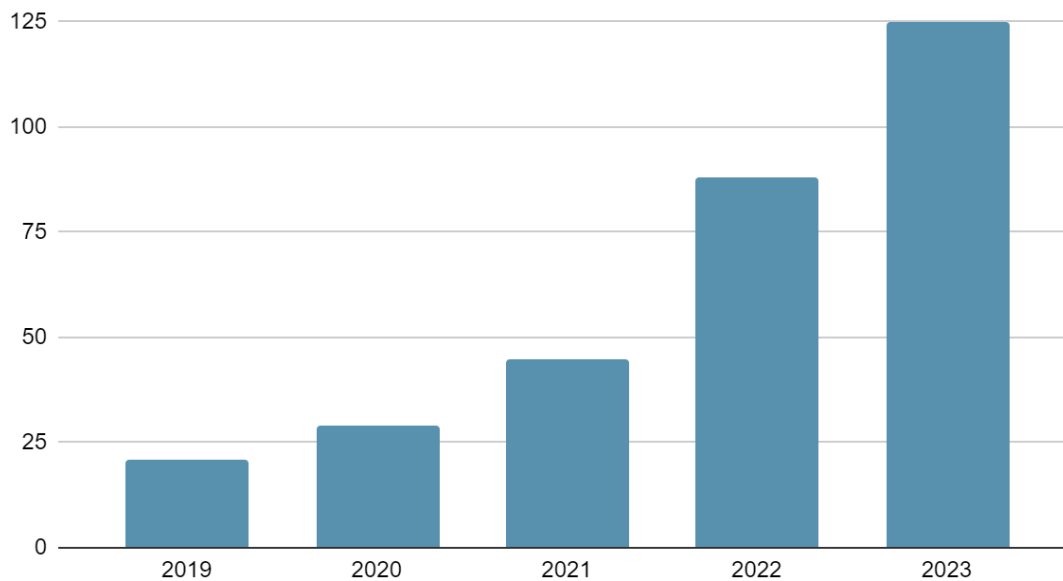
In addition to preparing students for the NIMS/FEMA credentials, the CTE department has also created a work-based experience. The tables, below, show the steady rise in opportunities for work





experience students have found through CPS CTE programs and the business partners for each pathway with the corresponding number of students who interned during the 2022-2023 school year.

Growth of Internship Opportunities



Work-based Learning and Internships

Type of Programs	Schools	2022 -2023
Healthcare - TriHealth STW Program	Hughes, RVE	21
Healthcare - TriHealth STW Summer Pilot	Walnut, RVE, and Hughes	2
Travel/Hospitality - IHL Program	Withrow	9
Level Up - Kroger Pilot	Aiken	4
Ohio Tech Internship Summer Program - ODE	Hughes, Taft, Walnut Hills, and Gamble	6
Zoo Academy - unpaid	Hughes	44
FCC Futures Program	Variety	26
Children's Hospital	Withrow	3
IHL - Media Arts	Oyler	2
Project Life Programs - unpaid	Variety	30
UC Health	Woodward	7
P&G JumpStart	Taft	7





Total Number of Students in WBL		161
		2023 Goal = 125

Student Achievement

Currently, industry credentials, seal completion, and internship participation is updated at the school level. Data is dependent on the timely entry of student progress, which inhibits in-time interventions based on student data. An exploration of how to improve data management could assist school and district CTE staff to ensure that they have an accurate picture of which students might need additional interventions and what supports to put in place to assure that the student shows proficiency. Data pulled as of April 28, 2023, did not include exam scores from Riverview East High School, which is notable as their health occupations pathways experienced a higher than usual pass rate, with 100% of one class passing the final WebXam for their course.

The WebXam is an online testing portal used by Career Technical Education (CTE) throughout the state of Ohio in order to have students participate in end-of-course testing needed for graduation” (WebXam 2023). Most CPS students leave their CTE program with the NIMS/FEMA 10-point credential and an additional two points from the Stop the Bleed and CPR credential.

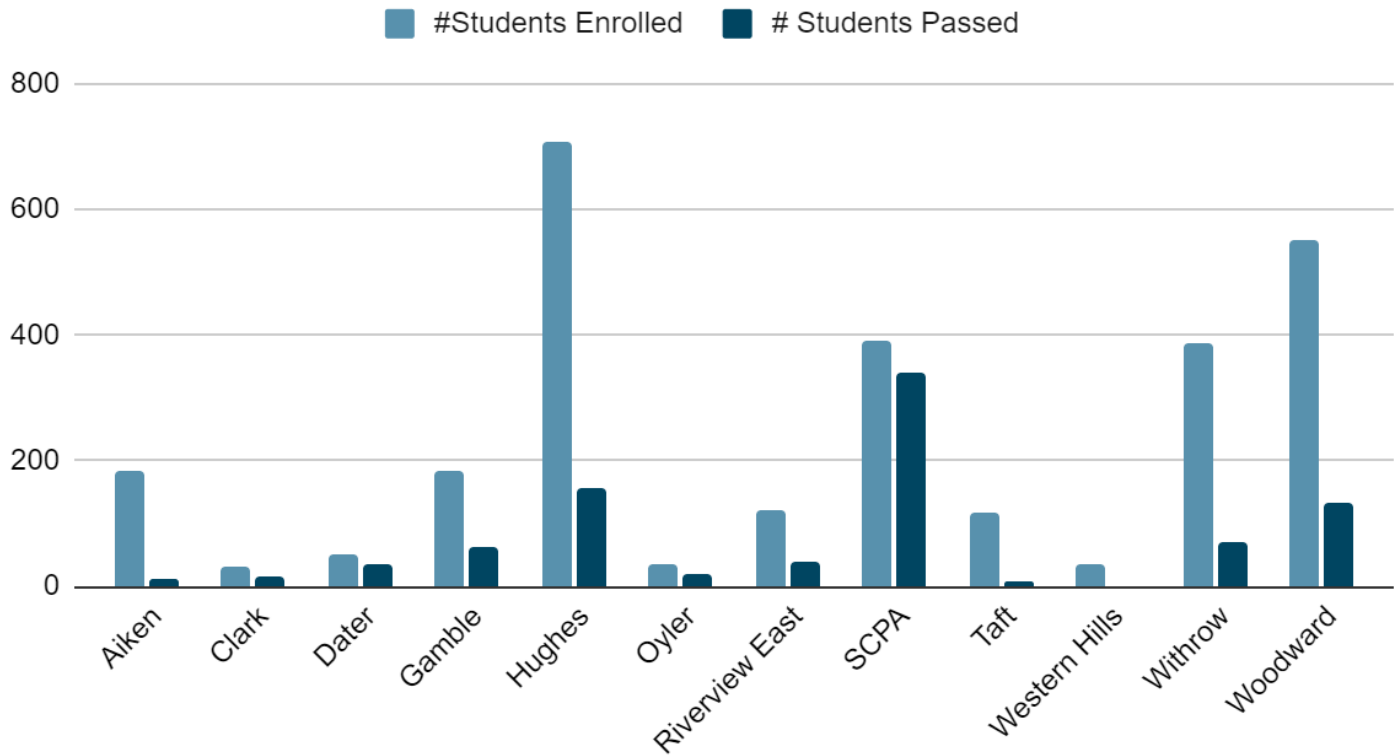
Industry Credentials

While earning industry credentials is a part of one path toward graduation and is not the outcome measurement utilized by the ODE to monitor programming, employers do not necessarily recognize the WebXam. Ideally, students will not only pass the state assessment for the course but also with the credentials needed to pursue employment. Already, CPS boasts a wide range of industry credential offerings and is producing students ready for the workforce. The chart below shows the data from the 2021-2022 school year. It is important to note that industry credentials are challenging to track. Students must self-report results, as testing scores are not connected to a school system database. Once the student has self-reported, then the results must be entered into PowerSchool and transferred to EMIS. The credentials reported for each school site could contain inaccuracies due to the complications of the reporting process. One action to be included in any plan to increase the credentials earned should be to codify the reporting process to reduce potential errors and omissions.





WebXam Pass Rates by Number Enrolled





Methodology

Because the success of CTE programs has the potential to change graduation outcomes for so many students, the input of multiple groups has been included in this audit. The Instructional Equity team, including the senior director and managers, visited schools to complete school observations and conversations with teachers and students. Additional visits to CTE programs occurred as part of the Instructional Review process and included Core Content Managers, Department of Student Services Managers, and members of the school team. Data from the state CTE program and CPS CTE and Data and Assessment departments provide insight into program outcomes and highlight areas of need. The Department of Student Services also contributed to the conversations about increasing student opportunities to earn credentials.

CTE Equity Audit Team Contributors

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Findings

After reviewing data and visiting classrooms it is clear that three key areas must be addressed:

- Increase the number of students showing proficiency on WebXam assessments
- Develop effective preparation strategies for industry-recognized credentials
- Offer a wider range of opportunities to appeal to students with diverse interests and skills.

Classroom Instruction

If CTE is to fulfill its mission, significant attention must be given to how to ensure students have the support in place to earn credentials related to students' identified pathways. Classroom observations have shown that the cognitive load in many classrooms is carried by the teacher. While being critical to the CPS graduation rate, CTE teachers are often teachers who have worked in the field and may not have an extensive background in classroom instruction. They come to education as experts in their field and may lack the pedagogical knowledge to lead students to mastery on required assessments.

Interest-Based Enrollment

The ODE has encouraged districts to support programming that fills a need within the community where there is a high level of growth and expected salaries are projected above the poverty level. Subsequently, newer programs have focused on careers in Information Technology (IT) and Health Occupations. Students who are more mechanically inclined are limited in the programs which benefit from their skill set. Two traditional programs CPS has not offered for many years are Cosmetology and Automotive Maintenance.

The greatest challenge to offering a wide range of programming is that students select their high schools at the beginning of their sixth-grade year. Students may not yet know where their career interests lie at such an early age and by the time students have identified a career of interest they may not have access to that program on their campus. District-wide marketing of high school programs to all fifth and sixth-grade students should include the CTE programs offered at each site. Ideally, CPS would offer a program for students who discover their interests later in high school that allows them to





continue at their current school and participate in a program offered at another location where the desired program is not currently available.

NIMS/FEMA

Students across the district in nearly every career pathway pursue the NIMS/FEMA credential as a safety net to meet the new graduation requirements. This credential package earns students 10 points with the Stop the Bleed and CPR courses providing the additional two points needed to meet graduation requirements. The success rate for students passing the assessments within this credential is high but comes at the cost of shifting test preparation efforts away from the student's chosen pathway credentials. The universal focus on this pathway is meant to be temporary as the new graduation requirements are phased in. In subsequent years, CPS will see an increase in credentials aligned to career pathways due to changes outlined below, Increasing Outcomes. Appendix A shows the current industry credentials for each of the career pathways. While this is meant to be a temporary response to a significant shift in requirements for graduation, the efforts to pass these tests detract from the focus of students in non-related career pathways.

Six Sigma Lean Green and Yellow Belt and Lead for Change

Six Sigma is a methodology that seeks to eliminate defects in business processes by using statistical analysis and quality management techniques. Green and Yellow Belt Courses are designed to teach high school students the basics of Six Sigma, including tools such as Pareto charts, histograms, and process mapping. The Green Belt course provides a more in-depth study of Six Sigma principles and techniques, while the Yellow Belt course offers a more introductory level of instruction. Both courses generally focus on problem-solving skills, data analysis, and process improvement techniques. These courses can be valuable for students who are interested in pursuing careers in fields such as manufacturing, healthcare, agriculture, or business, where quality management and process improvement are important.

The Six Sigma Green and Yellow Belt credentials allow a student to earn up to nine quality points toward the 12-point requirement to show competency. When paired with a leadership course such as Lead for Change, Students are able to earn the full requirement. Like the NIMS/FEMA credential, these credentials can count across pathways. The advantage of this credential over NIMS/FEMA is that students can utilize this credential as a valuable addition to their resume as they seek employment in





their post-secondary careers. It is not uncommon for applicants to include their Six Sigma training achievements as part of their resumes, and the learning can serve to make them an asset to future employers.

The drawbacks to this credential are that they must be taught by instructors who have received training and certification through Six Sigma, which could be costly if CPS were to scale up this program to address the many students who have yet to meet one of the criteria for showing competency. Possible solutions could be to include embedding the leadership element within the advisory period beginning in ninth grade. This could potentially guarantee each high school student a minimum of a three-point credential. While we generally think of CTE pathways when we discuss credentials, students may earn credentials outside of CTE classes. This opens the possibility for electives such as a senior seminar, which could be taught by teachers with a variety of certifications. Alternatives could include adding after-school programs or summer seminars.

CPR/Stop the Bleed

The CPR/Stop the Bleed credentials, like the NIMS/FEMA package and the Six Sigma Green and Yellow Belts, are included across all career pathways and account for a possible two points toward the showing competency requirement. These credentials could be built into the Health/PE courses as their requirements align with current CPS curricula. Because students must be assessed by a certified trainer, CPS may need to employ a combination of tactics to scale this option to meet the need. CPS could provide training for current Health/PE or other content teachers so that each school has certified staff in-house to assess students and sign off on their certifications. Another option could be to bring in an outside vendor to assist schools with certifications at several points in the year. In order to add this option immediately, the district will have to set up vendor-run clinics, during and outside of the school day, where students can cycle through to show competency.





For Consideration

ADDITIONAL PROGRAMMING TO CONSIDER

The following recommendations arose from an examination of current challenges and deficits across the district. Of particular concern is the creation of programming to support ELL students and to strengthen the partnership between CPS and local public safety agencies to train students to fill gaps in local essential services.

Public Safety Academy

The City of Cincinnati wants to partner with CPS to create a public safety academy that will increase the number of students graduating from high school with the credentials and experience to address critical staffing needs. Students can immediately join the fire department, EMT, or 911 dispatch. Through this partnership state-of-the-art facility will be created, in which students will experience real-world challenges relevant to their field and prepare them for the workplace,

The current Public Safety Academy located at Western Hills High School benefits from instructors respected and loved by students who are enthusiastic. This program, however, needs more space for effective instruction. The schools and district CTE department have attempted to mitigate this challenge by adding storage units for gear and equipment. Still, there is no space for larger investments such as a fire truck or an ambulance for simulation. Additionally, inclement weather disrupts the learning process because these additional facilities are located outside. This program requires a large loading bay to house all equipment and simulators to be fully effective, which may require the program to relocate.

Dater High School's loading bay, formerly the home of an automotive program in years past, could be a possibility for retaining and expanding a program on the West Side, but this would require an agreement between the two schools for shared space utilization. An additional program, housed at another location, could provide much-needed expansion of this opportunity for students. Woodward High School's campus offers four loading bays, currently housing existing health, construction, and manufacturing programs, making it a contender for consideration as the host school for this program. CPS is prepared to offer this additional program at Woodward next year in the 2024-2025 school year and has applied to ODE to add a Public Safety Academy,





Hospitality/Culinary

Dater High School's Hospitality/Culinary program is a model for a successful CTE program. Students perform hands-on tasks daily, show pride in their accomplishments and participate in significant opportunities to apply their learning to real-world settings such as catering events and planning a cafe for district employees. It is the only high school offering the Culinary and Hospitality pathway. This limitation is due to the lack of space for a student kitchen, classroom, and service suite in the remaining schools. If space could be identified, funds for the creation of additional programs could be included in future Perkins Grant applications.

Health Occupations

Jobs within this field are plentiful as there is a growing nationwide shortage. This CTE Pathway is popular with students and may benefit from expanding to offer various credentials to prepare students for post-graduate employment. The ODE offers several options for programs that are senior-level only, which reduces the student's time commitment, allowing the exploration of additional coursework as well as the opportunity for core curricular support if necessary. A significant increase in students graduating with credentials in this field

Improving Outcomes

Understanding Course Blueprints and Preparing for WebXams

The ODE publishes course standards and test blueprints for CTE courses. Like materials published for core classes, these materials provide teachers with direction as to the most essential content to emphasize to ensure student success on end-of-course tests. Professional development focused on aligning curriculum, similar to the work done by the World Languages and Montessori teams, could create course look-fors and the pacing necessary for students to master all key concepts prior to the final assessment.

By the end of the 2023 school year, the Montessori and World Language teams will have presented curricula for adoption. For both groups, this process required a deep dive into the state standards and how those standards may have changed in recent years. Additionally, the groups studied existing state assessments and created "non-negotiables" that must be included in their





courses in order to best prepare their students. CTE teachers across the district would greatly benefit from a similar process.

The information provided by the state to support teachers in preparing students for the assessment is extensive. Not only do the testing blueprints identify key standards for each career pathway, but they also provide the number of total questions and percentage of the test that aligns with each standard. Additionally, the depth of knowledge (DOK) for each standard has been provided so that teachers not only know what the students need to know but also how the students will be asked to demonstrate their knowledge for each part of the curriculum. As in the core curricula, the majority of the cognitive load on CTE assessments lies at DOK 2. This means that teachers must prepare the students to “Use academic concepts and cognitive skills to answer questions, address problems, accomplish tasks, and analyze texts and topics” (Webb 2002).

CTE teachers' awareness of tasks students will be asked to complete will assist in preparing students for excelling on the assessment. During classroom observations, teachers across multiple pathways and schools focused on DOK 1 questioning. They were clearly passionate about their course material and their care for the students was evident, but their questioning consistently required students to recall information, rather than apply learning to situations they may encounter in that career. If the CTE department led this pedagogical shift, CPS would likely see a dramatic increase in the pass rate of both WebXams and industry credentials.

In addition to aligning course blueprints to curriculum maps and classroom instruction, teachers benefit from the opportunity to take the test for themselves. During the fall of 2022, CTE teachers were able to review WebXams at Hughes High School. In years past, teachers would have had to travel to Columbus, which made the review session out of the reach of most CPS teachers. However, once the option was presented close to home, most CTE teachers took advantage of it. Anecdotal reports from teachers as students are taking WebXams this year have been tremendously positive. The CTE department anticipates a higher pass rate for the 2022-2023 school year. An additional option for CPS would be to explore purchasing practice tests and tutoring resources to help students prepare for the tests. These practice tests would allow students to experience the types of questions commonly asked and would help students build confidence going into the final assessment.





Field to Classroom Instructional Support

CTE teachers may be entering education as career and field experts, and as such may not be familiar with strategies to assist students with mastering content-specific vocabulary, developing comprehension of technical resources, or dissecting assessment questions and selecting strategies for finding answers. Professional development in Sheltered Instruction Observation Protocol (SIOP) has been offered previously, but due to attrition, may be revisited as a way to support literacy acquisition. SIOP was created to support English language learners, but a strategic focus on the eight components would benefit all students in CTE classrooms.

The SIOP Model consists of eight interrelated components:

- Lesson Preparation
- Building Background
- Comprehensible Input
- Strategies
- Interaction
- Practice/Application
- Lesson Delivery
- Review & Assessment





Call to Action

As the new Ohio graduation requirements go into effect this year, career credentials have become urgently important. For students who have not yet passed the English II or Algebra I exam, industry credentials may be the best path toward graduation. While we take steps to strengthen students' reading and math skills, we cannot overlook the importance of the CTE program as a lifeline for students in this first year of implementation. In a school district where more than 70% of students qualify for free or reduced lunch based on household income, providing students with access to excellent career preparation for life-supporting occupations has the potential to end generational poverty across the city.

With this purpose in mind, the Instructional Equity Team recommends the following actions:

- Undergo curriculum adoption for each program to include alignment of course curriculum and pacing with state standards and identified DOK levels
- Identification and purchase of exam preparation resources to familiarize students with the thinking tasks required to show mastery of the course material
- Offer professional development on engagement strategies, lesson planning, and supporting literacy within content areas to increase the impact of instruction
- Conduct a student survey to determine where interests lie for new programming across the district.
- Add more programs to address a variety of student interests
- Consider the renovation of an unused facility to allow the expansion of programs currently limited by space

Through these actions CPS will significantly increase not only the graduation rate but also the number of students achieving post-secondary employment. As student success in our programs continues to increase we will realize our potential to be the leading district in CTE state-wide.





Appendix A CTE Pathways and Credentials by School and Region

	Pathways offered (West)	Credentials
Aiken	<ul style="list-style-type: none"> Agricultural and Environmental Systems-Agribusiness Education and Training-Teaching Professions Engineering and Science Technologies-Engineering and Science Technologies 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
Dater	<ul style="list-style-type: none"> Business and Administrative Services-Logistics and Supply Chain Management Hospitality and Tourism-Culinary 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
Gamble	<ul style="list-style-type: none"> Agricultural and Environmental Systems-Agriculture, Food and Natural Resources Information Technology-Programming and Software Development 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
Hughes	<ul style="list-style-type: none"> Agricultural and Environmental Systems-Animal Science Engineering and Science Technologies-Engineering and Science Technologies Engineering and Science Technologies-Engineering and Science Technologies-Project Lead the Way (Middle School) Health Science-Medical Bioscience Information Technology-Programming and Software Development 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
Oyler	<ul style="list-style-type: none"> Arts and Communication-Media Arts 	Law and Public Safety-NIMS/FEMA Package
SCPA	<ul style="list-style-type: none"> Arts and Communication-Media Arts Arts and Communication Performing Arts Arts and Communication-Visual Design and Imaging 	Law and Public Safety-NIMS/FEMA Package
Taft	<ul style="list-style-type: none"> Health Science-Exercise Science and Sports Medicine Information Technology-Cybersecurity Information Technology-Information Support and Services Information Technology-Interactive Media Information Technology-Introduction to Program 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
Virtual	<ul style="list-style-type: none"> Information Technology-Senior Only Microsoft Office 	
West High	<ul style="list-style-type: none"> Law and Public Safety-Firefighting and Emergency Medical Services 	Law and Public Safety-NIMS/FEMA Package



Appendix B CTE Pathways and Credentials Offered by School on the East Side

	Pathways offered (East)	Credential
Clark	<ul style="list-style-type: none"> Agricultural and Environmental Systems-Horticulture 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
Hughes	<ul style="list-style-type: none"> Agricultural and Environmental Systems-Animal Science Engineering and Science Technologies-Engineering and Science Technologies Engineering and Science Technologies-Engineering and Science Technologies-Project Lead the Way (Middle School) Health Science-Medical Bioscience Information Technology-Programming and Software Development 	Law and Public Safety-NIMS/FEMA Package Prostart Ohio Apprenticeship Council-Pre Apprenticeship
Riverview	<ul style="list-style-type: none"> Health Science-Allied Health and Nursing 	Law and Public Safety-NIMS/FEMA Package Ohio Apprenticeship Council-Pre Apprenticeship
SCPA	<ul style="list-style-type: none"> Arts and Communication-Media Arts Arts and Communication Performing Arts Arts and Communication-Visual Design and Imaging 	Law and Public Safety-NIMS/FEMA Package
Shroder	<ul style="list-style-type: none"> Health Science-Medical Bioscience 	Law and Public Safety-NIMS/FEMA Package Elanco Veterinary Medical Applications Certification
Virtual	<ul style="list-style-type: none"> Information Technology-Senior Only Microsoft Office 	
Walnut	<ul style="list-style-type: none"> Information Technology-Senior Only Cybersecurity 	Law and Public Safety-NIMS/FEMA Package
Withrow	<ul style="list-style-type: none"> Business and Administrative Services-Business and Administrative Services 	Law and Public Safety-NIMS/FEMA PackageL
Woodward	<ul style="list-style-type: none"> Health Science-Allied Health and Nursing Construction Technologies-Structural Engineering and Science Technologies-Engineering and Science Technologies 	Law and Public Safety-NIMS/FEMA Package NCCER Level 1





- Health Science-Medical Bioscience
- Manufacturing-Manufacturing Operations

OSHA
HAZWOPER
Ohio Apprenticeship
Council-Preapprenticeship
Health Science-Phlebotomy
EKG
Certified Patient Care
Technician
Health Science-Pharmacy
Technician