



# Career and Technical Education: Industry-Recognized Credentials

Policy on Industry-Recognized Credential Definition and  
Criteria, Approval and Review Process, List of  
State-Approved Credentials

CTE Committee, Governor's Workforce Development Board

May 2024

**GOVERNOR'S WORKFORCE DEVELOPMENT BOARD  
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The Governor's Workforce Development Board is grateful to the staff of the Maryland State Department of Education who made extensive contributions to this policy, as well as the hundreds of industry representatives, educators, workforce development professionals, and other constituents who contributed valuable insight during its development.

## Policy Issuance 2024-01

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**TO:** Maryland State Department of Education; Maryland Department of Labor; Maryland Higher Education Commission; Local Education Agencies; Maryland Community Colleges; Maryland Local Workforce Development Boards; employers; and other pertinent agencies and stakeholders

**FROM:** CTE Committee of the Governor's Workforce Development Board

**DATE:** May 22, 2024

**SUBJECT:** The *Blueprint for Maryland's Future* Industry-Recognized Credentials Policy

**PURPOSE:** To provide policy guidance on defining industry-recognized credentials of value and on the CTE Committee-approved list of industry-recognized credentials that will count toward the *Blueprint for Maryland's Future* 45% goal.

**ACTION:** Applicable staff at the above named agencies will ensure all relevant employees, service providers, and vendors are aware of this updated policy and will issue compliant implementation or procedural guidance, if and as needed.

**EFFECTIVE:** Beginning in the 2025-2026 School Year (i.e., July 1, 2025)

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## Summary

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**The College and Career Readiness (CCR) Pillar of the *Blueprint for Maryland's Future* aims to ensure that students graduate from high school with the knowledge and skills required to be successful as they enter college or begin their career, and that they be on a structured career pathway at the time of graduation.**<sup>1 2</sup> This requires the creation of a CTE system that champions Registered Apprenticeships starting in high school, which culminates in a nationally recognized industry-recognized credential upon completion, and that also prioritizes other industry-recognized credentials that prepare and qualify high school graduates for work within in-demand fields.<sup>3</sup>

The following policy outlines a new statewide definition for industry-recognized credentials, and which credentials will support the *Blueprint for Maryland's Future* ("the *Blueprint*") goal that, by the 2030-31 school year and each year thereafter, 45% of public high school graduates will have completed the high school level of a Registered Apprenticeship or another industry-recognized credential by the time of graduation.

**The GWDB CTE Committee defines an industry-recognized credential (IRC) as:**

*An industry-recognized credential (IRC) is a formal validation of an individual's skills and/or competencies that align with state or regional in-demand occupations and is recognized by industry and employers. It may be a certification, license, or credential that is obtained through an assessment process, is portable, and may be stackable. The IRC leads to documented positive employment outcomes, ensures relevance in the labor market, and supports career advancement and economic development for credential holders.*

In order to be approved by the GWDB CTE Committee as an industry-recognized credential within this definition, **a credential must meet the following seven core criteria** and two optional criteria, which are further defined in the following policy guide:

1. Aligns with In-Demand Occupations
2. Provides Documented Outcomes
3. Validated by Industry
4. Assessment-Based
5. Standards-Driven
6. Attainable and Accessible
7. Portable
8. Stackable (preferred, but not required for approval)
9. Renewable (preferred, but not required for approval)

This policy guide provides more information on the updated CTE Committee and MSDE State-approved list of industry-recognized credentials for application to high school programs (effective beginning in the 2025-2026 School Year), as well as the credential application, review, and approval process.

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<sup>1</sup> The *Blueprint for Maryland's Future* statute, <https://aib.maryland.gov/Pages/blueprint-law.aspx>

<sup>2</sup> Apprenticeship 2030 Commission Interim Report, January 2024, <https://bit.ly/424pf9d>

<sup>3</sup> AIB's Comprehensive Implementation Plan, updated August 2023, <https://bit.ly/3UOYBf9>

## Introduction

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### **In Maryland, as in the rest of the United States, the work to advance economic mobility and independence has evolved dramatically in the post-pandemic economy.**

Transformative economic shifts, driven by rapid technological innovation and the long-term impacts of the Great Recession, global pandemic, and other economic headwinds, have reshaped the landscape of education and employment. Earning an industry-recognized credential in addition to a high school diploma is increasingly critical to success in a growing range of jobs, including entry-level opportunities. In recognition of this reality, Maryland is committed to expanding pathways to credentials and family-sustaining careers, including through Registered Apprenticeship and career and technical education (CTE) pathways.

The Governor's Workforce Development Board's (GWDB's) CTE Committee and the Maryland State Department of Education (MSDE) recognize the importance of building greater alignment between education and workforce needs - including through modernizing the state's approach to conferring high-value industry-recognized credentials that meet the demands of our state's economy and lead to pathways to work, wages, and wealth. With a myriad of these credentials offered across each CTE Program of Study, discerning and transparently articulating their real-world value is a complex but crucial task. Maryland is part of a national movement of 26 states incorporating industry-recognized credentials into their high school accountability measures.<sup>4</sup> The CTE Committee is charged with making critical decisions on how these credentials are being identified, assessed, and awarded under the *Blueprint for Maryland's Future* ("the *Blueprint*").

This policy lays out guidelines for Maryland's educational and workforce development leaders to identify high-value industry-recognized credentials with clarity and conviction. It calls for a collaborative approach to ensure transparency and clear alignment on messaging to students, caregivers, educators, and employers.

The most essential criterion for high-value industry-recognized credentials is unequivocal: they must be a conduit to employment that ensures a family-sustaining wage. Achieving this standard requires a unified effort from industry, workforce development, K-12, and postsecondary education leaders to identify and endorse the credentials that align with the needs of the labor market, particularly in high-skill, high-wage, and/or in-demand fields. Encouraging learners to attain these credentials, coupled with meticulous data collection and reporting, is imperative. Maryland's leadership must guide more students, especially those from historically marginalized and underserved communities, toward quality credentials as a stepping stone to work, wages, and wealth. The vitality of Maryland's economy and keeping the State's promise to leave no one behind hinge on our commitment to this endeavor.

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<sup>4</sup> USDOE, Bridging the Skills Gap: Career and Technical Education in High School, September 2019, <https://www2.ed.gov/datastory/cte/index.html>

## Purpose

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**The *Blueprint for Maryland's Future* (“the *Blueprint*”) establishes a goal that by the 2030-2031 school year and each year thereafter, 45% of public high school graduates will have completed the high school level of a Registered Apprenticeship or another industry-recognized credential by the time of graduation.** The intention of this goal is to ensure that students graduate from high school with the knowledge and skills required to be successful as they enter college or begin their career, and that they be on a structured career pathway at the time of graduation.

The *Blueprint* goes on further to state that, to the extent practicable, the CTE Committee shall ensure that the largest number of students achieve the requirement of this subsection by completing a high school level of a Registered Apprenticeship. This requires the creation of a CTE system that offers rigorous high school apprenticeships as the primary industry-recognized credential that produces graduates ready and qualified to work within in-demand fields.<sup>5</sup> Every graduate of a Registered Apprenticeship program receives a nationally recognized credential, referred to as a Certificate of Completion.<sup>6</sup> **Therefore, completers of the “high school level of a Registered Apprenticeship” will go on to earn an industry-recognized credential as they complete the Registered Apprenticeship after graduation.**

The *Blueprint* requires that the GWDB CTE Committee define the apprenticeships and industry-recognized credentials that count toward the 45% goal.<sup>7</sup> The CTE Committee and the Maryland State Department of Education (MSDE) recognize that it is essential to align around one policy that defines industry-recognized credentials, one process and set of criteria to evaluate credentials, and one joint list of approved industry-recognized credentials that both MSDE and the CTE Committee recognize for Perkins V funding and under the *Blueprint's* 45% goal, respectively.<sup>8</sup>

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<sup>5</sup> AIB's Comprehensive Implementation Plan, updated August 2023, <https://bit.ly/3UOYBf9>

<sup>6</sup> This portable credential signifies that the Apprentice is fully qualified to successfully perform an occupation. Many Registered Apprenticeship programs, particularly in high-growth industries such as healthcare, advanced manufacturing, and transportation, also offer interim credentials as apprentices master skills at each stage of their Registered Apprenticeship.

<sup>7</sup> The CTE Committee's draft apprenticeship framework defining the “high school level of a Registered Apprenticeship” was presented to the CTE Committee on February 28, 2024, and released for public comment in March 2024. The CTE Committee is continuing to update this framework and anticipates releasing a final updated Apprenticeship Policy in the summer of 2024. To view the original draft, visit [www.gwdb.maryland.gov/ctecomm/ctecomm-apprenticeshipguidancefeb2024.pdf](http://www.gwdb.maryland.gov/ctecomm/ctecomm-apprenticeshipguidancefeb2024.pdf).

<sup>8</sup> Perkins V is the Strengthening Career and Technical Education for the 21st Century Act, which was signed into law by President Trump on July 31, 2018. This bipartisan measure reauthorized the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) and continued Congress' commitment in providing nearly \$1.4 billion annually for CTE programs. [cte.ed.gov/legislation/perkins-v](http://cte.ed.gov/legislation/perkins-v)

## Defining Industry-Recognized Credentials

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The *Blueprint for Maryland's Future* requires that the CTE Committee define which industry-recognized credentials (IRCs) count toward the 45% goal (i.e., that 45% of public high school students complete the high school level of a Registered Apprenticeship or another industry-recognized occupational credential before they graduate).

### SCOPE

The GWDB CTE Committee and MSDE have worked together to coordinate development of one shared list of approved IRCs that both MSDE and the CTE Committee will recognize, in accordance with the CTE Committee's definition and criteria detailed below. The following definition, core criteria, application process, and list of State-approved IRCs will be recognized for the purposes of:

- CTE Committee's oversight of progress toward the *Blueprint's* 45% goal; and
- MSDE's approval of post-College and Career Readiness pathways and for federal Perkins V funding of programs.

There will be additional applications for the new statewide definition and criteria for industry-recognized credentials. However, this policy focuses on the application of the following definition and criteria to the items listed above.

### DEFINITION

**An industry-recognized credential (IRC) is a formal validation of an individual's skills and/or competencies that align with state or regional in-demand occupations and is recognized by industry and employers. It may be a certification, license, or credential that is obtained through an assessment process, is portable, and may be stackable. The IRC leads to documented positive employment outcomes, ensures relevance in the labor market, and supports career advancement and economic development for credential holders.**

### CORE CRITERIA

Industry-recognized credentials must meet each of the seven core criteria listed below:

1. **Aligns with In-Demand Occupations:** The credential is associated with occupations that are in high demand or emerging within Maryland as defined by the Governor's Workforce Development Board (GWDB) using state labor market data and employer feedback, or as defined as a regional need or emerging credential by the Local Workforce Development Board.
2. **Provides Documented Outcomes:** There is evidence of positive employment and wage outcomes for individuals who have obtained the IRC, demonstrating its effectiveness in contributing to workforce readiness and economic advancement.
  - a. In cases where the credential does not lead to a living wage job, or where data is not yet available, the credential should show that it can be stacked with



other credentials, exhibiting progression in a career pathway with positive wage outcomes; or that it meets criteria #1 since it leads to an in-demand occupation.

3. **Validated by Industry:** The credential is recognized by multiple employers within an industry sector and is developed or endorsed by industry associations when applicable, ensuring its relevance and value in the job market.
4. **Assessment-Based:** The credential is awarded upon successful completion of an assessment process that may include written, oral, or performance evaluations, demonstrating the individual's mastery of specific knowledge, skills, and abilities required for a particular occupation or skill area.
5. **Standards-Driven:** The credential is based on industry-accepted standards for skills and competencies, ensuring that it reflects the current needs and practices of the relevant industry.
6. **Attainable and Accessible:** The credential is attainable by high school students through secondary, postsecondary, or other training programs and is accessible to a wide range of learners, including special populations, to support equity and inclusion in access to attainment of industry-recognized credentials.<sup>9</sup>
7. **Portable:** The credential can support employment in more than one region of the state and, where applicable, outside the state.

It is preferable for the industry-recognized credential to also meet these additional two criteria (stackable and/or renewable), but these are not a requirement for approval as they are not universally applicable to every valuable industry-recognized credential:

8. **Stackable:** The credential can:
  - a. be transferred seamlessly to postsecondary work through acceptance for credit or hours in core program courses at an institution of higher education;
  - b. be counted toward hours in an aligned Registered Apprenticeship program; or
  - c. be part of a prescribed coherent sequence of industry-recognized credentials that show progressive skill development and qualify credential earners for professional advancement within their industry.<sup>10</sup>
9. **Renewable:** Where applicable, the credential is renewable, requiring holders to engage in continuous learning or re-assessment to maintain the credential's status and relevance.

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<sup>9</sup> USDOE defines the term "special populations" within the Carl D. Perkins CTE Act of 2006, <https://www.govinfo.gov/content/pkg/COMPS-3096/pdf/COMPS-3096.pdf>

<sup>10</sup> USDOE Stackable Credentials Tool Kit, developed by the Mapping Upward project, provides an overview of the stackable credentials approach and strategies for tracking success, course correcting, and measuring impact. <https://cte.ed.gov/initiatives/community-college-stackable-credentials>

## COMPLETION

In order for a public high school student to be considered as successfully “completing” an industry-recognized credential to be counted in the *Blueprint’s* 45% goal, the student must meet one of the following:

1. Credential is awarded to the student upon successful completion of an assessment process that may include written, oral, or performance evaluations before they graduate high school; or
2. When the collective college credit earned in high school can be applied toward a specific postsecondary certificate or degree that is recognized by the industry for a specific occupation and meets the IRC criteria as defined in this policy; or<sup>11 12</sup>
3. Completion of a pre-apprenticeship program that has been approved for registration of a certification that meets the IRC criteria as defined in this policy.<sup>13 14</sup>

It should be recognized that not all CTE Programs of Study (POS) will necessarily lead to an industry-recognized credential on the State-approved list.<sup>15</sup> Here are a few considerations when there is no credential directly tied to the POS:

- Lean into opportunities to expand the high school level of Registered Apprenticeships into new occupations and Programs of Study.
- Understand that not every student is going to engage in programming that counts toward the 45% goal - it is okay for a student to be in the other 55%.
- Reminder that the 45% goal is for *all* high school students, not just CTE students. Take special consideration of dual enrollment students as an opportunity to earn industry-recognized credentials and participate in Registered Apprenticeships.

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<sup>11</sup> See the section titled “Recommended Next Steps” #1 for further information on defining this term.

<sup>12</sup> This entails meeting the preferred criteria of Stackable (a. The credential can be transferred seamlessly to postsecondary work through acceptance for credit or hours in core program courses at an institution of higher education.)

<sup>13</sup> See the section titled “Recommended Next Steps” #2 for further information on defining this term.

<sup>14</sup> USDOL defines pre-Apprenticeship as “a training model designed to assist individuals who do not currently possess the minimum [academic or skills] requirements for selection into an apprenticeship program to meet the minimum selection criteria established in a program sponsor’s apprenticeship standards required under part 29 of this chapter (29 CFR part 29) and which maintains at least one documented partnership with a Registered Apprenticeship program. It involves a form of structured workplace education and training in which an employer, employer group, industry association, labor union, community-based organization, or educational institution collaborate to provide formal instruction that will introduce participants to the competencies, skills, and materials used in one or more apprenticeable occupations.” USDOL Training and Employment Notice No. 23-23, issued March 5, 2024, [www.dol.gov/agencies/eta/advisories/ten-23-23](http://www.dol.gov/agencies/eta/advisories/ten-23-23).

<sup>15</sup> Throughout this publication, the “State-approved” list is recognized as a function of both MSDE (for Perkins) and the CTE Committee (for the *Blueprint’s* 45% goal).

## Application Process for New Industry-Recognized Credentials

Local Education Agencies (LEAs), Community Colleges, Local Workforce Development Boards (LWDBs), and other organizations in Maryland must submit an application for industry-recognized credentials not already approved for use across the state. This section details the requirements for requesting an industry-recognized credential's approval, timelines for the application process, and alternative routes to approval for credentials unique to local and regional labor markets.

The electronic application for a new industry-recognized credential may be accessed by [clicking here](#). The application window to consider new industry-recognized credentials not on the accompanying list within this policy issuance (see Appendix 2) will be August 1-October 31, 2024, and will be open annually.

### CREDENTIALS UNIQUE TO LOCAL WORKFORCE NEEDS

There may be instances in which industry-recognized credentials emerge that bring great value to local or regional employers but do not meet the full criteria for inclusion on the CTE Committee-MSDE listing of qualified statewide credentials. Local applications for credentials unique to local workforce needs must be verified by the LWDB in partnership with the LEA; submissions made by LEAs, Community Colleges, or other organizations without the support of the LWDB will not be considered. The expectation is that the application and supporting documentation will be submitted as a collaborative effort between the LWDB, LEA, and/or Community College.

As a part of the submission, requesting organizations must provide supporting documentation to ensure MSDE and the CTE Committee can assess whether the credential satisfies the criteria for local demand. Supporting documentation includes, at a minimum:

Documented support from the LWDB and the LEA, such as a letter from the associated CTE local advisory council (LAC). The documented support must make a compelling argument that the credential is necessary for entry-level positions and is valued and supported by local employers.

### TIMELINE

The timeline for making requests for credentials to be added to the CTE Committee and MSDE approved list, and for moving through the approval process, is detailed in the table below.

Date	Description
August 1	Online <a href="#">application</a> for new industry-recognized credentials to be assessed <b>opens</b> .
October 31	Online application for new industry-recognized credentials to be assessed <b>closes</b> .

Date	Description
November	Maryland State Department of Education (MSDE) reviews each submission for completeness and follows up with requesting entities to gather any additional information needed to make a recommendation to approve or not approve.
December	MSDE prepares submission packages for each industry-recognized credential application meeting foundational application requirements, including a recommendation to <b>approve</b> or <b>not approve</b> the IRC. All packets and recommendations will be sent to CTE Committee staff by December 31 <sup>st</sup> for review by the full CTE Committee.
January	The CTE Committee will formally vote to <b>approve</b> or <b>not approve</b> each IRC package provided to them by MSDE. Once a formal determination is made, MSDE will notify the requesting entity of the status via email. Each approved IRC will be added to the state-approved IRC list on July 1 <sup>st</sup> for use in the upcoming school year.
February	MSDE and the CTE Committee will publish the annual State-Approved Industry-Recognized Credential list for use in the upcoming school year.
July 1	The State-Approved Industry-Recognized Credential list goes into effect for the upcoming school year.

## Review Process for Existing Industry-Recognized Credentials

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**To ensure the relevance and quality of Industry-Recognized Credentials (IRCs) within CTE programs, the Maryland State Department of Education (MSDE) collaborates closely with the Governor’s Workforce Development Board (GWDB) CTE Committee to conduct a comprehensive review of existing IRCs.** This biennial review process is a cornerstone of Maryland’s commitment to aligning CTE programs with the evolving needs of the industry and the labor market. The following narrative outlines this collaborative review process.

Each August through November on even-numbered years, with 2024 marked as the inaugural year, MSDE and the CTE Committee embark on a strategic review of the IRCs currently included in the state’s CTE programs. This systematic and collaborative process ensures that each credential remains relevant, meets the high-quality standards expected by the industry, and aligns with the state’s workforce development goals.

### Step 1: Data Collection and Analysis

The review process begins with MSDE collecting data and feedback on the utilization, outcomes, and perceived value of each IRC from a variety of stakeholders, including educators, students, industry partners, and workforce development professionals. This step may involve analyzing employment trends, wage data, and job placement rates for credential holders, as well as soliciting feedback through surveys and focus groups.

### Step 2: Labor Market Information (LMI) Review

Simultaneously, the GWDB in collaboration with MSDE conducts an in-depth analysis of current LMI to identify emerging trends, skills demand, and potential gaps in the state’s workforce. This analysis helps in assessing whether the existing IRCs continue to align with economic development strategies and labor market needs.

### Step 3: Collaboration with the CTE Committee

With this foundational data in hand, MSDE collaborates with the CTE Committee, comprising representatives from education, industry, and labor, to review each IRC against the established Maryland Framework for Career and Technical Education.<sup>16</sup> This collaborative effort ensures a comprehensive evaluation from multiple perspectives, emphasizing the credential’s relevance, quality, and contribution to student success.

### Step 4: Stakeholder Engagement

MSDE and the GWDB CTE Committee engage with stakeholders to discuss the findings of their review and gather additional insights. This engagement may take the form of public forums, workshops, or targeted meetings with industry advisory boards, ensuring that the review process benefits from a wide range of expertise and viewpoints.

### Step 5: Decision Making and Implementation

Based on the analysis, stakeholder feedback, and collaboration between MSDE and the CTE Committee, decisions are made regarding the continuation, modification, or removal of IRCs

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<sup>16</sup> The GWDB CTE Committee and MSDE are collaborating on the development of a statewide CTE Framework. This framework is forthcoming in mid-2024. Once posted, this can be found at [www.gwdb.maryland.gov/ctecomm/](http://www.gwdb.maryland.gov/ctecomm/).

from the state's CTE programs. This step ensures that the credential offerings remain dynamic and responsive to the needs of both students and employers.

**Step 6: Communication and Support**

Following the review, MSDE communicates the outcomes to all stakeholders, providing clear rationales for decisions made. Additionally, MSDE offers guidance and support to CTE programs affected by any changes, ensuring a smooth transition and maintaining the integrity of the CTE offerings.

## Recommended Next Steps

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In consideration of the valuable stakeholder input received during two rounds of public feedback, the Governor's Workforce Development Board (GWDB) CTE Committee recommends that the following steps be taken to support implementation of this updated policy.

1. The CTE Committee recognizes that there are multiple pathways for students to enter a career prepared for the rigor required of the occupation, which are inclusive of Registered Apprenticeships, industry-recognized credentials, and college credit that is well-aligned to their chosen career field. The CTE Committee recommends that the Maryland State Department of Education (MSDE) and the Maryland Higher Education Commission (MHEC) develop appropriate guidance to define "completion" when the collective college credit earned in high school can be applied towards a specific postsecondary certificate or degree that is recognized by the industry for a specific occupation (such as engineering or teaching degree). There are valuable instances where courses lead to advanced standing at the postsecondary level within the student's identified career and the degree itself meets the standard of an industry-recognized occupational credential established within this policy. The CTE Committee recommends that this guidance be developed and submitted to the CTE Committee for review by October 1, 2024.
2. There are instances in which a pre-apprenticeship with an approved Registered Apprenticeship sponsor could meet the industry-recognized credential criteria established within this policy. Therefore, the Maryland Department of Labor's Division of Workforce Development and Adult Learning shall coordinate with the the Maryland Apprenticeship and Training Council (MATC), CTE Committee, MSDE, and Registered Apprenticeship (RA) sponsors to develop guidance around reviewing and approving pre-apprenticeship program completions as an IRC. The CTE Committee recommends that this guidance be developed and submitted to the CTE Committee for review and approval by October 1, 2024.
3. MSDE, in coordination with the CTE Committee, shall develop guidance and marketing materials to assist Local Education Agencies (LEAs) and other relevant partners in implementation and communication of this updated policy over the summer and fall of 2024. As part of this work, MSDE already intends to develop the following companion materials, in coordination with the CTE Committee:
  - o **Guidance:** instructions on operationalizing a new list of State-approved IRCs, updated data reporting practices, the process for having new IRCs considered for approval, and recommended guidance on braiding funding to support the expansion of IRC attainment.
  - o **Credential Assessment | Business Rules for Assessing Quality Criteria:** detailed step-by-step instructions for how each criteria is assessed.
  - o **Program of Study Crosswalk:** to map out which IRCs are aligned with State-approved CTE programs.

- **One-pagers for in-demand industry-recognized credentials:** to provide LEAs, career counselors, students, caregivers, and others with information on what careers these IRCs lead to, what the earning potential is, testing requirements, and other pertinent information for making informed decisions.
4. MSDE, in coordination with the CTE Committee, shall review the following concerns regarding equity and access in order to determine the most appropriate next steps for addressing these challenges:
    - Geographical limitations in credential testing sites and frequency of credential assessments being provided to all Maryland students;
    - Resources for testing accommodations for students with disabilities.
  5. The GWDB CTE Committee will work with relevant agencies to explore and refine the application of the IRC definition and criteria in other settings in addition to/outside of high school programs.

For more information on recommended actions to support growth in Registered Apprenticeships for high school students that support the *Blueprint's* 45% goal, please see the CTE Committee's apprenticeship guidance.<sup>17</sup>

## APPENDICES

1. Information on the development of the IRC definition, criteria, and stakeholder engagement.
2. State-Approved Industry-Recognized Credentials List.

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<sup>17</sup> The CTE Committee's draft apprenticeship framework defining the "high school level of a Registered Apprenticeship" was presented to the CTE Committee on February 28, 2024, and released for public comment in March 2024. The CTE Committee is continuing to update this framework and anticipates releasing a final updated Apprenticeship Policy in the summer of 2024. To view the original draft, visit [www.gwdb.maryland.gov/ctecomm/ctecomm-apprenticeshipguidancefeb2024.pdf](http://www.gwdb.maryland.gov/ctecomm/ctecomm-apprenticeshipguidancefeb2024.pdf).



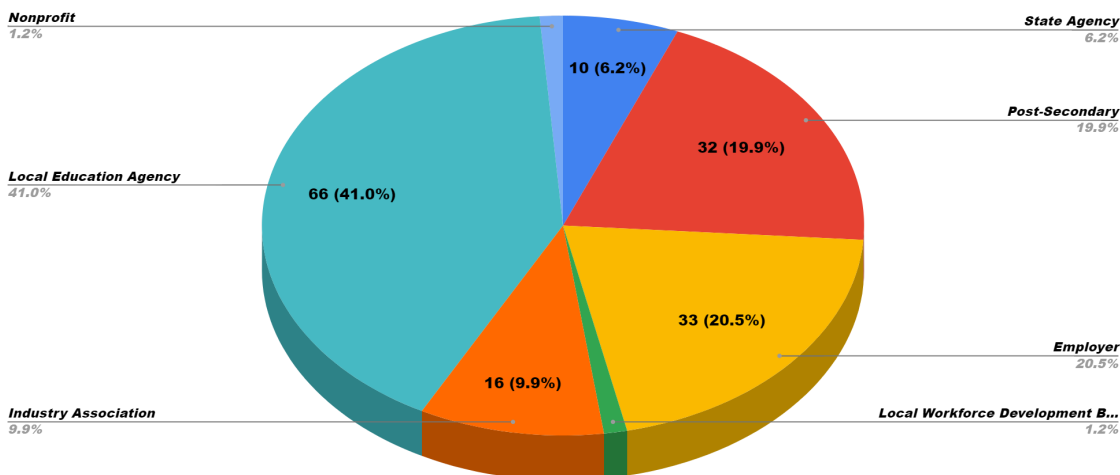
## Appendix 1 | IRC Development and Stakeholder Engagement

The Governor’s Workforce Development Board (GWDB) CTE Committee collaborated with the Maryland State Department of Education (MSDE) to examine national best practices, and gathered input from a range of stakeholders to inform the development of an aligned definition, set of criteria, and approval process.<sup>18</sup>

The GWDB CTE Committee and MSDE issued the initial proposed draft industry-recognized credential definition and criteria as a joint product for public comment in mid-December 2023. This feedback was reviewed, thematically coded to uplift recurring themes, and the framework updated as a result of feedback. The updated draft industry-recognized credential framework was then released for a second public comment period in mid-March 2024. Throughout this process, the GWDB CTE Committee and MSDE have presented and met with multiple stakeholder groups to solicit additional feedback. The GWDB CTE Committee received over 160 responses to the public feedback form. Feedback was representative of a wide variety of stakeholders, including Local Education Agencies (LEAs), Local Workforce Development Boards, employers and industry associations, and postsecondary educators (see Chart 1 below). This feedback informed a thoughtful analysis and revision of the final definition and required criteria as presented in this policy.

**Chart 1: Respondents to the public feedback forms represented the following organization types**

### Count of Organization Type



<sup>18</sup> For more information on the national landscape review of other state IRC models, review the original draft of the Industry-Recognized Credential framework presented to the CTE Committee on November 29, 2023. [www.qwdb.maryland.gov/ctecomm/ctecomm-ircnov2023.pdf](http://www.qwdb.maryland.gov/ctecomm/ctecomm-ircnov2023.pdf)

As a result of the feedback, and specifically respondents indicating which of the original 10 proposed criteria were the most valuable, the GWDB CTE Committee refined the approval of industry-recognized credentials to include seven core criteria and two preferred, but not required, criteria.

MSDE then assessed the current list of state-approved credentials that had previously been approved for Perkins V within Maryland. The GWDB CTE Committee and MSDE assessed this list against the updated criteria because this ensured that these credentials were already available within CTE programs of study and therefore in operation to ensure acceleration of implementation for in-demand credentials. This review resulted in an initial list of a little over 200 approved industry-recognized credentials. This initial approved list was shared publicly and made available for comment beginning February 28, 2024; however, it was noted that as of the release of that draft publication, there were several credentials that were still being evaluated due to requiring additional information for consideration. MSDE reviewed these credentials in spring 2024 and the accompanying list in this publication has been updated accordingly.

## Appendix 2 | State-Approved Industry-Recognized Credentials

Beginning July 1, 2025, the Maryland State-Approved Industry-Recognized Credentials meeting all required core criteria are listed in the table below. Once approved by the GWDB CTE Committee, MSDE will publish the annual State-approved Industry-Recognized Credential list on a publicly available website in a format that can be downloaded. Please reference the application process section for new industry-recognized credentials not in the list below to be considered. That application will open August 1.

Career Cluster	IRC Code	Credential Name	Issuing Entity
Arts, Media, and Communication	11017	Adobe Certified Associate After Effects	Adobe (Certiport)
Arts, Media, and Communication	11018	Adobe Certified Associate Animate	Adobe (Certiport)
Arts, Media, and Communication	11005	Adobe Certified Associate Dreamweaver	Adobe (Certiport)
Arts, Media, and Communication	11006	Adobe Certified Associate Illustrator	Adobe (Certiport)
Arts, Media, and Communication	11007	Adobe Certified Associate InDesign	Adobe (Certiport)
Arts, Media, and Communication	11008	Adobe Certified Associate Photoshop	Adobe (Certiport)
Arts, Media, and Communication	11009	Adobe Certified Associate Premiere Pro	Adobe (Certiport)
Arts, Media, and Communication	11013	Certified Associate Webmaster (CAW)	WOW
Arts, Media, and Communication	11016	Certified Web and Mobile App Developer Associate	WOW
Arts, Media, and Communication	11015	Certified Web Animator Associate	WOW
Arts, Media, and Communication	11012	Certified Web Designer Associate (CWDSA)	WOW
Arts, Media, and Communication	11014	Certified Web Developer Associate (CWDVA)	WOW
Arts, Media, and Communication		Unity Certified User Certification - Artist	Unity (Certiport)
Arts, Media, and Communication		Unity Certified User Certification - Programmer	Unity (Certiport)
Arts, Media, and Communication		Unity Certified User Certification - VR Developer	Unity (Certiport)
Business Management and Finance		Microsoft Office Associate	Microsoft
Business Management and Finance	21013	Quickbooks Certified User Desktop Certification	Intuit

<b>Career Cluster</b>	<b>IRC Code</b>	<b>Credential Name</b>	<b>Issuing Entity</b>
Business Management and Finance	21014	Quickbooks Certified User Online Certification	Intuit
Construction and Development	31001	Autodesk AutoCAD Certified User	Autodesk
Construction and Development	31002	Autodesk Revit Certified User	Autodesk
Construction and Development	31017	AWS Certified Welding - BZ	American Welding Society (AWS)
Construction and Development	31014	AWS Certified Welding - FCAW	American Welding Society (AWS)
Construction and Development	31012	AWS Certified Welding - GMAW	American Welding Society (AWS)
Construction and Development	31013	AWS Certified Welding - GMAW-S	American Welding Society (AWS)
Construction and Development	31015	AWS Certified Welding - GTAW	American Welding Society (AWS)
Construction and Development	31016	AWS Certified Welding - SAW	American Welding Society (AWS)
Construction and Development	31011	AWS Certified Welding - SMAW	American Welding Society (AWS)
Construction and Development	31021	EPA Section 608 Core plus Type I	ESCO Group
Construction and Development	31022	EPA Section 608 Core plus Type II	ESCO Group
Construction and Development	31023	EPA Section 608 Core plus Type III	ESCO Group
Construction and Development	31026	EPA Section 608 Technician	ESCO Group
Construction and Development	31024	Leadership in Energy and Environmental Design (LEED) Green Associate Credential	U.S. Green Building Council (USGBC)
Construction and Development	31005	NCCER Core plus Level 1 Carpentry	National Center for Construction Education & Research (NCCER)
Construction and Development	31006	NCCER Core plus Level 1 Electrical	National Center for Construction Education & Research (NCCER)
Construction and Development	31009	NCCER Core plus Level 1 HVAC	National Center for Construction Education & Research (NCCER)
Construction and Development	31008	NCCER Core plus Level 1 Industrial Maintenance	National Center for Construction Education & Research (NCCER)

Career Cluster	IRC Code	Credential Name	Issuing Entity
Construction and Development	31004	NCCER Core plus Level 1 Masonry	National Center for Construction Education & Research (NCCER)
Construction and Development	31007	NCCER Core plus Level 1 Plumbing	National Center for Construction Education & Research (NCCER)
Construction and Development	31010	NCCER Core plus Level 1 Welding	National Center for Construction Education & Research (NCCER)
Construction and Development		Occupational Safety and Health Administration (OSHA) 30 Certification	Occupational Safety and Health Administration
Consumer Services, Hospitality and Tourism	41002	Barber License	Maryland Department of Labor
Consumer Services, Hospitality and Tourism	41010	Barber Stylist License	Maryland Department of Labor
Consumer Services, Hospitality and Tourism	41004	Certified Fundamentals Cook (CFC)	American Culinary Federation (ACF)
Consumer Services, Hospitality and Tourism	41005	Certified Fundamentals Pastry Cook (CFPC)	American Culinary Federation (ACF)
Consumer Services, Hospitality and Tourism	41007	Certified Hospitality Tourism Management Professional (CHTMP)	American Hotel & Lodging Educational Institute
Consumer Services, Hospitality and Tourism	41001	Cosmetology License	Maryland Department of Labor
Consumer Services, Hospitality and Tourism	41009	Hairstylist License	Maryland Department of Labor
Consumer Services, Hospitality and Tourism	41003	Nail Technician	Maryland Department of Labor
Consumer Services, Hospitality and Tourism	41006	National ProStart Certificate of Achievement	National Restaurant Association
Consumer Services, Hospitality and Tourism	41008	ServSafe Manager	ServSafe
Environmental, Agricultural and Natural Resources	51005	Animal Science Specialist certification (AEST)	Agriculture Education Services & Technology Inc. (AEST)
Environmental, Agricultural and Natural Resources	51004	Certified Floral Designer	American Institute of Floral Designers (AIFD)
Environmental, Agricultural and Natural Resources	51001	Certified Professional Horticulturist (CPH)	Maryland Nursery, Landscape and Greenhouse Association, Inc.

Career Cluster	IRC Code	Credential Name	Issuing Entity
Environmental, Agricultural and Natural Resources	51003	Chesapeake Bay Landscape Professional Exam Level 1	Chesapeake Bay Landscape Professional (CBLP)
Environmental, Agricultural and Natural Resources	51007	EETC Principles of Small Engine Technology	Engine & Equipment Training Council (EETC) through ICEV
Environmental, Agricultural and Natural Resources	51006	Erosion and Sediment Control	Maryland Department of the Environment (MDE)
Environmental, Agricultural and Natural Resources	71012	ESRI ArcGIS Desktop certification	ESRI Academy
Environmental, Agricultural and Natural Resources	71011	Geographic Information System (GIS) certification	Digital Quest
Environmental, Agricultural and Natural Resources	51002	Maryland Registered Veterinary Technician (RVT) License	Maryland Department of Agriculture
Health and Biosciences	61010	Biotechnician Assistant Credentialing Exam (BACE)	Biotility
Health and Biosciences	61032	CAHIMA Certified Coding Associate (CCA)	Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
Health and Biosciences	61031	CAHIMA Registered Health Information Technician (RHIT)	Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
Health and Biosciences	61006	Certified Clinical Medical Assistant (CCMA)	National Healthcareer Association
Health and Biosciences	61005	Certified Dental Assistant (DANB)	Dental Assisting National Board, Inc.
Health and Biosciences	61011	Certified Dental Assistant (MSBDE)	Maryland State Board of Dental Examiners
Health and Biosciences	61059	Certified Medical Administrative Assistant (CMAA)	National Trade Institute
Health and Biosciences	61057	Certified Medical Assistant (CMA)	American Association of Medical Assistants (AAMA)

Career Cluster	IRC Code	Credential Name	Issuing Entity
Health and Biosciences	61038	Certified Medical Laboratory Assistant (CMLA)	American Medical Technologists (AMT)
Health and Biosciences	61001	Certified Nursing Assistant (CNA)	Maryland Board of Nursing
Health and Biosciences	61009	Certified Orthodontic Assistant (DANB)	Dental Assisting National Board, Inc.
Health and Biosciences	61013	Certified Orthodontic Assistant (MSBDE)	Maryland State Board of Dental Examiners
Health and Biosciences	61004	Certified Pharmacy Technician (CPhT)	Pharmacy Technician Certification Board
Health and Biosciences	61003	Certified Pharmacy Technician (ExCPT)	National Healthcareer Association
Health and Biosciences	61058	Certified Professional Coder (CPC)	American Academy for Professional Coders
Health and Biosciences	61014	Certified Registered Central Service Technician (CRCST)	IHAHCSM
Health and Biosciences	61021	Certified Respiratory Therapist	National Board for Respiratory Care (NBRC)
Health and Biosciences	61020	Certified Supervised Counselor - Alcohol and Drug	Maryland Department of Health
Health and Biosciences	61029	Certified Surgical Technologist (NBSTSA)	National Board of Surgical Technology and Surgical Assisting (NBSTSA)
Health and Biosciences	61036	Computed Tomography (ARRT)	American Registry of Radiologic Technologists (ARRT)
Health and Biosciences	61041	Dental Assistant (RDA)	American Medical Technologists (AMT)
Health and Biosciences	61056	Dental Hygienist License (MSBDE)	Maryland State Board of Dental Examiners
Health and Biosciences	61012	Dental Radiation Technologist (MSBDE)	Maryland State Board of Dental Examiners
Health and Biosciences	61002	Geriatric Nursing Assistant (GNA)	Maryland Board of Nursing
Health and Biosciences	61035	Magnetic Resonance Imaging (ARRT)	American Registry of Radiologic Technologists (ARRT)
Health and Biosciences	61030	Maryland Licensed Massage Therapist (LMT) License	Board of Massage Therapy Examiners
Health and Biosciences	61027	Maryland Physical Therapy License	Maryland Board of Physical Therapy Examiners

Career Cluster	IRC Code	Credential Name	Issuing Entity
Health and Biosciences	61040	Medical Administrative Specialist (CMAS)	American Medical Technologists (AMT)
Health and Biosciences	61037	Medical Assistant (RMA)	American Medical Technologists (AMT)
Health and Biosciences	61062	National Certified Medical Assistant (NCMA)	National Center for Competency Testing (NCCT)
Health and Biosciences	61008	National Entry Level Dental Assistant (DANB)	Dental Assisting National Board, Inc.
Health and Biosciences	61015	NCLEX - Licensed Practical Nurse	Maryland Board of Nursing
Health and Biosciences	61060	Pharmacy Technician License	Maryland Board of Pharmacy
Health and Biosciences	61039	Phlebotomy Technician	American Medical Technologists (AMT)
Human Resource Services	71013	Child Development Associate	Council for Professional Recognition
Human Resource Services	71002	Emergency Medical Responder (EMR) (MIEMSS)	Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Human Resource Services	71016	Emergency Medical Technician (EMT) (NREMT)	National Registry of Emergency Medical Technicians
Human Resource Services	71001	Emergency Medical Technician (EMT) (MIEMSS)	Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Human Resource Services	71021	ESRI GIS Fundamentals Foundation (EGFF2201)	ESRI Academy
Human Resource Services	71003	Fire Fighter I	Maryland Fire and Rescue Institute
Human Resource Services	71004	Fire Fighter II	Maryland Fire and Rescue Institute
Human Resource Services	71008	Hazardous Material Operations	Maryland Fire and Rescue Institute
Human Resource Services	71020	Nationally Registered Paramedic	National Registry of Emergency Medical Technicians
Human Resource Services	71019	Paramedic (MIEMSS)	Maryland Institute for Emergency Medical Services (MIEMSS)
Human Resource Services	71009	ParaPro	Educational Testing Service (ETS)



Career Cluster	IRC Code	Credential Name	Issuing Entity
Human Resource Services	71010	PraxisCORE	Educational Testing Service (ETS)
Human Resource Services	71006	Rescue Tech - Site Ops	Maryland Fire and Rescue Institute
Human Resource Services	71007	Rescue Tech - Vehicle and Machinery Extraction	Maryland Fire and Rescue Institute
Human Resource Services	71005	Truck Company Fireground Ops	Maryland Fire and Rescue Institute
Information Technology	81025	98-366: Networking Fundamentals	Microsoft
Information Technology	81024	98-367: Security Fundamentals	Microsoft
Information Technology	81023	98-381: Introduction to Programming using Python	Microsoft
Information Technology	81026	98-383: introduction to Programming using HTML and CSS	Microsoft
Information Technology	81027	98-388: Introduction to Programming using Java	Microsoft
Information Technology	81022	Apple Swift Level 1	Certiport
Information Technology	81050	AWS-CP (Amazon Web Services Cloud Practitioner)	Amazon Web Services
Information Technology	81051	AWS-SA (Amazon Web Services Solutions Architect Associate)	Amazon Web Services
Information Technology		CCNA	Cisco (Certiport)
Information Technology		CCST Cybersecurity	Cisco (Certiport)
Information Technology		CCST IT Support	Cisco (Certiport)
Information Technology		CCST Networking	Cisco (Certiport)
Information Technology	81011	Cisco CCT	Cisco (Certiport)
Information Technology	81005	CompTIA A+	Computing Technology Industry Association (CompTIA)
Information Technology	81004	CompTIA ITF	Computing Technology Industry Association (CompTIA)
Information Technology	81009	CompTIA Linux+	Computing Technology Industry Association (CompTIA)
Information Technology	81006	CompTIA Network+	Computing Technology Industry Association (CompTIA)

Career Cluster	IRC Code	Credential Name	Issuing Entity
Information Technology	81008	CompTIA PenTest+	Computing Technology Industry Association (CompTIA)
Information Technology	81007	CompTIA Security+	Computing Technology Industry Association (CompTIA)
Information Technology	81030	Cyber Crime Investigator (CCI)	Department of Defense
Information Technology		Cyber Ops	Cisco (Certiport)
Information Technology	81052	CYSA+ (Cybersecurity Analyst)	CompTIA
Information Technology	81029	Digital Forensic Examiner (DFE)	Department of Defense
Information Technology	81028	Digital Media Collector (DMC)	Department of Defense
Information Technology	81042	IT Specialist: Cybersecurity	Cisco
Information Technology	81038	IT Specialist: Databases	Certiport
Information Technology	81040	IT Specialist: Java	Certiport
Information Technology	81037	IT Specialist: Network Security	Certiport
Information Technology	81036	IT Specialist: Networking	Certiport
Information Technology	81039	IT Specialist: Python	Certiport
Information Technology	81010	LPI Linux Essentials	Linux Professional Institute (LPI)
Information Technology	81041	Magnet Certified Forensics Examiner (MCFE)	Magnet Forensics
Information Technology	81035	Microsoft Certified: Azure Fundamentals	Microsoft
Information Technology	81034	Oracle Certified Associate, Database SQL	Oracle
Information Technology	81033	Oracle Certified Associate, Java SE 8 Programmer	Oracle
Information Technology	81003	Oracle Certified Foundations Associate, Database	Oracle
Information Technology	81002	Oracle Certified Foundations Associate, Java	Oracle
Manufacturing, Engineering and Technology	31020	ADDA Apprentice Drafter Exam	American Design Drafting Association
Manufacturing, Engineering and Technology	31027	Autodesk 360 Fusion	Autodesk
Manufacturing, Engineering and Technology	31003	Autodesk Inventor Certified User	Autodesk

Career Cluster	IRC Code	Credential Name	Issuing Entity
Manufacturing, Engineering and Technology		Certified Additive Manufacturing Fundamentals	Society of Manufacturing Engineers
Manufacturing, Engineering and Technology	91016	Certified Logistics Associate	Manufacturing Skill Standards Council (MSSC)
Manufacturing, Engineering and Technology	91017	Certified Logistics Technician	Manufacturing Skill Standards Council (MSSC)
Manufacturing, Engineering and Technology		Certified Manufacturing Associate	Society of Manufacturing Engineers
Manufacturing, Engineering and Technology		Certified Manufacturing Technologist	Society of Manufacturing Engineers
Manufacturing, Engineering and Technology		Certified Onshape Professional	Onshape
Manufacturing, Engineering and Technology		Certified Production Technician 4.0	Manufacturing Skill Standards Council (MSSC)
Manufacturing, Engineering and Technology		Certified Production Technician CPT+ Skill Boss	Manufacturing Skill Standards Council (MSSC)
Manufacturing, Engineering and Technology		Certified SolidWorks Associate (CSWA-Mechanical Design)	SolidWorks
Manufacturing, Engineering and Technology		Certified SolidWorks Professional (CSWP-Mechanical Design)	SolidWorks
Manufacturing, Engineering and Technology		FCR-O1 (Operator 1)	FANUC America
Manufacturing, Engineering and Technology		FCR-O2 (Operator 2)	FANUC America
Manufacturing, Engineering and Technology	91011	NIMS CNC Milling: Operations with Measurement, Materials & Safety	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91009	NIMS CNC Milling: PGM Setup & Operations with Measurement, Materials & Safety	National Institute for Metalworking Skills Inc. (NIMS)

<b>Career Cluster</b>	<b>IRC Code</b>	<b>Credential Name</b>	<b>Issuing Entity</b>
Manufacturing, Engineering and Technology	91010	NIMS CNC Turning: Operations with Measurement, Materials & Safety	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91008	NIMS CNC Turning: Programming Setup & Operations with Measurement, Materials & Safety	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91007	NIMS Drill Press Skills I with Measurement, Materials & Safety exam	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91006	NIMS Grinding Skills I with Measurement, Materials & Safety exam	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91002	NIMS Job Planning, Benchwork & Layout with Measurement, Materials & Safety exam	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91003	NIMS Manual Milling Skills I with Measurement, Materials & Safety exam	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91004	NIMS Turning Operations: Turning Between Centers with Measurement, Materials & Safety exam	National Institute for Metalworking Skills Inc. (NIMS)
Manufacturing, Engineering and Technology	91005	NIMS Turning Operations: Turning Chucking Skills with Measurement, Materials & Safety exam	National Institute for Metalworking Skills Inc. (NIMS)
Transportation Technologies	101061	Advanced Climate Control Manufacturer Specific	Ford Motor Company
Transportation Technologies	101068	Advanced Engine Performance Specialist Test L1	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101020	ASE A1: Engine Repair	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101021	ASE A2: Automatic Transmission/Transaxle	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101022	ASE A3: Manual Drive Train & Axles	National Institute for Automotive Service Excellence (ASE)

Career Cluster	IRC Code	Credential Name	Issuing Entity
Transportation Technologies	101023	ASE A4: Suspension & Steering	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101024	ASE A5: Brakes	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101025	ASE A6: Electrical/Electronic Systems	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101026	ASE A7: Heating & Air Conditioning	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101027	ASE A8: Engine Performance	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101028	ASE A9: Light Vehicle Diesel Engines	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101006	ASE Student: Automatic Transmission/Transaxle	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101059	ASE Student: Automobile Service Technology	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101002	ASE Student: Brakes	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101003	ASE Student: Electrical/Electronic Systems	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101004	ASE Student: Engine Performance	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101005	ASE Student: Engine Repair	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101008	ASE Student: Heating and Air Conditioning	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101009	ASE Student: Maintenance and Light Repair	National Institute for Automotive Service Excellence (ASE)

Career Cluster	IRC Code	Credential Name	Issuing Entity
Transportation Technologies	101007	ASE Student: Manual Drive Train and Axles	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101010	ASE Student: Painting and Refinishing	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101001	ASE Student: Suspension and Steering	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101060	ASE: Inspection Maintenance & Minor Repair	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101064	ASE/609 Refrigerant Recovery and Recycling	ASE Refrigerant Recovery and Recycling Program
Transportation Technologies	101019	Class A Commercial Driver License (CDL)	Maryland Department of Transportation
Transportation Technologies	101052	Class B Commercial Driver License (CDL)	Maryland Department of Transportation
Transportation Technologies		Commercial Learner's Permit (CLP)	Maryland Department of Transportation
Transportation Technologies	101013	Diesel Engines student	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101062	Differential and 4WD Systems	Ford Motor Company
Transportation Technologies		FAA Part 107 Drone Pilot License	Federal Aviation Administration
Transportation Technologies		Forklift Operator Certificate	Multiple: Must be Occupational Safety and Health Administration Approved
Transportation Technologies		Hazardous Materials Handler Certification	Multiple: Must be Department of Transportation Approved
Transportation Technologies	101014	I-CAR Aluminum GMA (MIG) Welding Certificate	Inter-Industry Conference on Auto Collision Repair (I-CAR)
Transportation Technologies	101055	I-CAR Non-Structural Technician Platinum ProLevel 1 Credential	Inter-Industry Conference on Auto Collision Repair (I-CAR)
Transportation Technologies	101054	I-CAR Refinish Technician Platinum ProLevel 1 Credential	Inter-Industry Conference on Auto Collision Repair (I-CAR)

<b>Career Cluster</b>	<b>IRC Code</b>	<b>Credential Name</b>	<b>Issuing Entity</b>
Transportation Technologies	101012	I-CAR Steel GMA Welding Certificate	Inter-Industry Conference on Auto Collision Repair (I-CAR)
Transportation Technologies	101069	Maintenance and Light Repair G1	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101063	Manual Transmission and Transaxle Repair	Ford Motor Company
Transportation Technologies	101015	Non-Structural Analysis and Damage Repair student	National Institute for Automotive Service Excellence (ASE)
Transportation Technologies	101011	Structural Analysis and Damage Repair student	National Institute for Automotive Service Excellence (ASE)