

Report on Industry Credential Applications:

Office of College and Career Pathways

Industry-Recognized Credential Application Support

Maryland State Department of Education (MSDE) launched a new webpage and opened the application link for state-approved industry-recognized credentials (IRCs) on August 26, 2024. To support applicants, a sample application and ongoing technical assistance was made publicly available from August 26 to October 31, 2024.

During this time, MSDE established an IRC Review Committee to evaluate submitted applications following the criteria established in policy by the CTE Committee. The IRC committee was comprised of subject matter experts who could ensure the accessibility, representation, and functionality of the IRC being reviewed was appropriate and aligned with its intended purposes within the state.

Industry Recognized Credential (IRC) Review Committee included:

- Coordinator, Industry Recognized Credentials Maryland State Department of Education
- Coordinator, Apprenticeships Maryland State Department of Education
- Program Manager, Apprenticeship and Training -Maryland Department of Labor
- Senior Policy Advisory, CTE Committee Governor's Workforce Development Board
- Coordinator, School Support (Secondary Programs) Maryland State Department of Education
- Specialist, Secondary Transition Performance Maryland State Department of Education
- Coordinator, Comprehensive Arts Education Maryland State Department of Education
- Coordinator, Postsecondary Credit and P-Tech Maryland State Department of Education
- Executive Director Maryland Future Farmers of America (Special consultation only)

In September and October 2024, Committee members received an orientation, detailed review process training, and ongoing collaboration with MSDE's IRC Coordinator. Each subject matter expert was assigned 2-10 IRC applications to review alongside an evaluation form and submitted their findings to the IRC Coordinator. Each evaluation form verified that the IRC applications under review met the 7 core criteria, were accessible to a high school student, and flagged instances where follow-up or additional support for the applicant was necessary. The IRC Coordinator monitored the progress of the portfolio of evaluations and provided technical assistance to applicants if their submissions were flagged as incomplete or requiring clarification.

When an application was flagged as incomplete or requiring additional information during the review process, MSDE promptly contacted the applicant via email, providing clear instructions for addressing the identified issues. If further clarification was needed, MSDE either scheduled or responded to requests for Google Meet discussions to ensure a thorough understanding of the necessary steps.

Each email acknowledged the submission, thanked the applicant for their effort, and offered detailed guidance on the core criteria, application qualifications, and submission requirements. The emails also included links to the MSDE IRC webpage and sample artifacts to assist with revisions. Applicants were encouraged to review the available resources and reach out for further support if needed.

MSDE maintained a comprehensive record of all communication, including emails and virtual meetings, to ensure transparency and accountability. This structured process allowed applicants to address flagged issues effectively, ensuring timely and successful application completion.

In future iterations of the IRC review process, it is recommended that the state consider balancing the composition of IRC reviewers by incorporating additional representation from key partners, such as the Maryland Department of Commerce and the Maryland Higher Education Commission (MHEC). Including these stakeholders would provide diverse perspectives on workforce alignment, economic priorities, and postsecondary pathways, ensuring that the IRCs under review meet the broader needs of Maryland's workforce and education system.

Application Data for Cycle One

This report presents the findings of the Maryland State Department of Education's first review of applications for the Maryland State Approved Industry-Recognized Credential (IRC) list. The IRC Committee established at MSDE reviewed 91 applications submitted by various organizations, including Local Education Agencies (LEAs), government agencies, for-profit organizations, nonprofit organizations, and others. Subject matter experts from MSDE and the Governor's Workforce Development Board (GWDB) reviewed a total of 68 unique and non-duplicative applications, evaluating them based on the criteria established in policy by the CTE Committee. Recommendations have been made accordingly.

The report provides a detailed overview of the distribution of submissions, the career clusters shaping the portfolio of applications, and MSDE's final endorsement. Additionally, this report outlines key recommendations for the CTE Committee's consideration during their review, along with feedback for improving the review process and ensuring better alignment with industry standards and educational programs of study.

APPLICATION BY SUBMISSION TYPE

Submission Type	Number of Applications
Local Education Agency	66
Government Agency	2
For-Profit Organization	9
Non-Profit Organization	10
Other	4
Total Applications	91
Total New Non-Duplicative IRC's Applications	68

APPLICATION BY CAREER CLUSTER

Career Cluster	Number of Applications
Arts, Media, and Communications	7
Business, Management, and Finance	13
Construction and Development	8
Environmental, Agricultural, and Natural Resources	14
Health and Bioscience	6
Human Resources Services	20
Information Technology	15
Manufacturing, Engineering, and Technology	6
Transportation Technology	2
Total	91

APPLICATION OUTCOME BY CAREER CLUSTER

Career Cluster	Recommended	Recommended with Reservation	Not Recommended	Deferred Recommendation
Arts, Media, and Communications	5	0	2	0
Business, Management, and Finance	2	1	6	0
Construction and Development	2	1	1	1
Environmental, Agricultural, and Natural Resources	4	4	5	0
Health and Bioscience	1	1	0	1

Career Cluster	Recommended	Recommended with Reservation	Not Recommended	Deferred Recommendation
Human Resources Services	5	2	5	1
Information Technology	1	4	7	0
Manufacturing, Engineering, and Technology	0	0	3	1
Transportation Technology	0	0	2	0
Total *Excludes 23 duplicates	20	13	31	4

APPLICATIONS BY LOCAL EDUCATION AGENCY (LEA)

LEA	Number of Applications
Nonprofit	10
For Profit	9
Government Agency	2
Other	4
Alleghany County	1
Anne Arundel	11
Baltimore City	3
Baltimore County	3
Calvert County	1
Charles County	1
Cecil County	O *

LEA	Number of Applications
Dorchester County	3
Frederick County	11
Garrett County	2
Harford County	8
Howard County	O*
Kent County	1
Montgomery County	6
Somerset County	O*
St. Mary's County	O*
Prince George's County	4
Washington County	9
Wicomico County	1
Worchester County	1
Total Unique Applications	91
19 of 91 applications were multi-LEA applications	

^{*} Some Local Education Agencies (LEAs), such as Cecil, Howard, Somerset, and St. Mary's did not submit independent applications. Instead, they provided letters of support or endorsement for applications submitted by another LEA or partnering organization.

BY OUTCOME

Decision Outcome	Number of Applications
Recommend	20
Applications in this category demonstrated excellence in meeting all seven required core criteria. These submissions included high-quality artifacts supported by strong evidence from a variety of stakeholders and resources. They clearly showed potential for gainful employment and significant value to Maryland's workforce system, as well as alignment with broader economic and workforce needs beyond the state. These programs exemplify the standards necessary for inclusion in the state's approved Industry-Recognized Credential (IRC) list.	
Recommend with Reservation:	12
While these applications met all seven core criteria, their artifacts were often weak and lacked diverse perspectives, relying on input from a single constituent voice. These applications show promise and recommendations are contingent on stricter business rules for state-aligned priorities or additional quality support from Maryland business leaders to meet workforce needs.	
Business rule refinement needed: 7	
Enhancing quality is preferred: 5	
Do Not Recommend	32
Applications in this category failed to meet the core criteria for approval. Common reasons included incomplete submissions, duplication of programs already on the approved list, or missing key artifacts necessary for evaluation. These deficiencies prevented MSDE from determining the program's alignment with the state's workforce needs or its value to Maryland's workforce system.	
Applications that did not meet 7 core criteria: 19	
Applications classified as entrance exams or skills assessment: 4	
Applications already on the approved list: 3	
Application meets developmental, rather than preferred leading standard: 5	
Deferred Recommendation	4
Applicants in this category are encouraged to collaborate with MSDE to strengthen their submissions or consider alternative credential pathways for review in the next approval cycle. This category applies to applicants whose proposals demonstrate student-centered best practices aligned with the state's economic development plan and the vision of a high-performing CTE system but require additional refinement to fully meet the seven core criteria.	
Total New Non-Duplicative IRC's Reviewed	68

Year One: Application Trends

The first cycle of applications for the Maryland State Approved IRC list offered valuable insights into the current landscape of industry-recognized credentials and the opportunities for growth within the review and submission process.

The portfolio of applications highlighted several areas of strength, including innovative credentials with strong industry alignment, evidence of collaboration among stakeholders, and a clear commitment to expanding high-quality career pathways for Maryland students.

AREAS OF APPLICANT STRENGTH

MSDE primarily recommended applications to the CTE Committee when the following conditions were met:

- All seven core criteria were met with additional non-vendor third-party endorsements from local and state partners:
- All seven core criteria were met with an effective demonstration of postsecondary articulation agreements.
 - Best example: The American Welding Society Qualification reported high school articulation to Wor-Wic Community College program completion and was similarly, supplemented by endorsements from Howard Community College (HCC) and the International Code Council (IECC). These alignments illustrate:
 - A portable license transferable to other jurisdictions was included in the artifact submission
 - Integration with academic pathways, specifically offering 27 college credits toward an associate's degree.
- All seven core criteria were met and specific hiring preferences for the IRC are identified in a job **description.** Successful applications focused on localized or state data to clarify the connection between certifications and Maryland's job market needs.

At the same time, the review process revealed areas where improvements can be made. Certain submissions lacked alignment with policy criteria or industry relevance, while others highlighted inconsistencies in application quality and clarity. These challenges present an opportunity to refine the application process, strengthen support for submitting organizations, and enhance alignment with Maryland's workforce priorities.

AREAS OF APPLICANT GROWTH

MSDE primarily recommended with reservation or did not recommend applications to the CTE Committee under the following conditions:

- Applications were incomplete.
- Applications that were already on the approved list were not recommended by MSDE this round, as they retain their active status and do not require reapproval.
- Applications presenting as curriculum or entrance exams, such as ASVAB, JROTC Employability Skills, WISE Financial Literacy, and EEI, were not recommended as they did not qualify as industrygrade certifications or credentials and were misaligned with the core criteria.

- Endorsements lacking clear hiring preference were considered insufficient external validations and more often not recommended.
- Job descriptions failing to mention the certification's preference in an attached job description were typically not recommended or recommended with reservation.
- Applications demonstrating discrepancies between the skills needed for the job and the skills the certification addresses.
- Inadequate Labor Market Information (LMI), including applications with an over-reliance on broad, national data rather than specific county- or state-level insights were often recommended with reservation.
- Reliance on vendor-provided case-making materials, such as those from Google or ICEV
- Blogs and news articles are not considered verifiable endorsements and are deemed to fall short of meeting the core criteria.
- Applications proposing high school credentials connected to industries primarily requiring PhDs were not recommended or were recommended with reservation due to the lack of demonstrated entry-level pathways or clear near-term local applicability.
- Applications **endorsing broad rather than specific** evidence of stackability.

Cycle Two: Considerations

Based on the insights gained from the initial cycle of IRC application reviews, the Maryland State Department of Education (MSDE) recommends the development of clearer, more robust business rules to guide the CTE Committee's policy implementation. The CTE Committee and MSDE are currently in the process of norming these practices, and the recommendations outlined below are an existing part of ongoing internal collaborations to strengthen the review and approval process:

Adherence to Policy

All seven core criteria must be met for recommendation consideration. Strictly adhering to established policies ensures public trust, fairness, and consistency now and in the future.

Strategic Recommendations for Workforce Alignment

- The CTE Committee's recommendations should align the IRC process with GWDB's sector strategy to strengthen connections between industry needs and credentialing efforts.
- MSDE recommends that the CTE Committee collaborate with MSDE to leverage the IRC process to intentionally align CTE program of study standards with IRC credentials. This could involve flagging or distinguishing, both on the IRC list and within the IRC application process, those credentials that align—or do not align—with the standards in CTE programs of study.
- MSDE recommends that the CTE Committee collaborate more closely with MSDE to engage employers and nonprofits requiring targeted application support. This partnership would increase the number of high-quality IRCs aligned with industry standards and workforce needs.
- As noted by the comprehensive arts community, the Committee should closely evaluate the career clusters and occupational diversity represented in approved applications each year to ensure inclusion across the full spectrum of pathways students may pursue and CTE programs offer.

Guidance on Credential Bundling Standards

The CTE Committee must establish clear guidelines on when and how lower-level credentials can collectively meet the 45% quality standard. This includes defining IRC data collection procedures to ensure certifications are tracked both individually and in combination.

For example, in the IEC pre-apprenticeship program, First Aid and OSHA 10 certifications are recognized as meeting the standard collectively but not independently. Providing clear business rules for data collection will help LEAs evaluate specific certification combinations, ensure consistency in reporting, and address concerns about meeting the quality standard.

Importantly, there are budgeting implications for allowing lower-level credentials to be considered in certain circumstances. If Local Education Agencies (LEAs) are permitted to use post-CCR Blueprint funds for certifications like OSHA 10, provided they are tied to a recognized apprenticeship program:

- 1. Reimbursement would only be provided upon completion, which may place financial strain on LEAs until students fulfill all requirements.
- 2. It creates a conflict because funds cannot be used for standalone OSHA 10 credentials if they are not on the approved list.

Managing Changes for Approved Credentials

As part of the ongoing refinement of our systems and the evolving nature of industry-recognized credentials (IRCs), MSDE recommends that the committee consider expanding business rules to guide the evaluation and notification process for changes to approved IRCs.

MSDE proposes the following framework for consideration:

- Administrative Changes: If an approved IRC undergoes minor adjustments, such as a name update, cleaning up standards, or renaming components, MSDE will notify the CTE Committee. These nonfunctional refinements are considered administrative updates and do not require re-evaluation, as they do not alter the credential's functionality
- Significant Changes Requiring Re-Evaluation: If a proposed change significantly impacts the structure or function of an IRC, such as:
 - The elimination or creation of domains not included in the original application standards,
 - Updates to testing environments or methodologies,
 - Revisions to core standards or technical requirements,

MSDE will submit the updated IRC for re-evaluation by the committee to ensure alignment with established criteria and standards.

Future Actions

The state-approved list of Industry Recognized Credentials will be available on the Maryland State Department of Education's Industry Recognized Credential webpage and documented in the CTE Committee's approved meeting minutes.

Applicants whose submissions were conditionally approved with reservations are required to contact the Coordinator of Industry Recognized Credentials within 60 days to submit additional verifying information. Failure to provide the requested quality artifacts within the allotted time will result in the application being deferred to the following year.

For applications not recommended or recommended with deferment, we strongly encourage reaching out to the Coordinator of Industry Recognized Credentials at MSDE to discuss the application further. Applicants are welcome and encouraged to resubmit in future cycles.

MSDE Recommendations (January 2025)

The CTE Committee's Policy on Industry-Recognized Credentials (IRCs) establishes the criteria, approval process, and review procedures for IRCs in the State of Maryland. Under this policy, MSDE is responsible for preparing annual submission packages for each IRC by December, including a recommendation for the CTE Committee to approve or not approve the credential. As outlined in the policy, the CTE Committee conducts a formal vote each January to approve or reject the IRC packages submitted by MSDE.

MSDE has completed its formal evaluation of application submissions, cross-referenced against the CTE Committee's policy and the required core criteria. Below, the CTE Committee will find MSDE's recommendation list and links to the submission packets for each IRC.

Link to Sample IRC Application

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Arts, Media, and Communications	11-2021	Adobe Certified Professional Express	Adobe (Certiport)	Do Not Recommend
Arts, Media, and Communications	27-0000	Adobe Content Creation and Marketing Certification	Adobe (Certiport)	Recommend
Arts, Media, and Communications	27-4011	AVID Certified Associate	AVID	Recommend
Arts, Media, and Communications		Design Thinking	Dent Education Inc.	Do Not Recommend
Arts, Media, and Communications	10.0301, 10.0302, 10.0305, 10.0307, 10.0399, 15.1503, 50.0401, 50.0409, 50.0710	PrintED	Printing & Graphic Communications Association (PGCA)	Recommend
Arts, Media, and Communications	27-4010	Certified Radio Operator	Society of Broadcast Engineers	Recommend

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Arts, Media, and Communications	27-1010, 27-1020, 27-2000	USITT Backstage Theatre Certification	United States Institute for Theatre Technology, Inc. (USITT)	Recommend
Business, Management, and Finance	11-0000, 13-0000, 15-0000, 17-0000, 19-0000, 21-0000, 23-0000, 25-0000, 27-0000, 29-0000, 31-0000, 33-0000, 35-0000, 37-0000, 39-0000, 41-0000, 43-0000, 45-0000, 47-0000, 49-0000, 51-0000, 53-0000	A*S*K Fundamentals of Ethics	A*S*K Institute	Do Not Recommend
Business, Management, and Finance	13-1199, 13-2011, 11- 2021	A*S*K Fundamental Business Concepts, Fundamental Marketing Concepts, Concepts of Finance, Concepts of Entrepreneurship, Concepts of Business Management	A*S*K Institute	Do Not Recommend
Business, Management, and Finance	11-2021	Adobe Acrobat Pro	Adobe (Certiport)	Recommend
Business, Management, and Finance		ACT National Career Readiness	American College Testing	Do Not Recommend
Business, Management, and Finance	13-2052	Center for Financial Responsibility Personal Financial Literacy Certification	Center for Financial Responsibility	Do Not Recommend

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Business, Management, and Finance	11-1021, 13-1199, 13- 2011	Entrepreneurship and Small Business	Certiport	Recommend with Reservation*
Business, Management, and Finance	27-3099	Express Employment Professionals Business Office Technology Certification	Express Employment Professionals	Do Not Recommend
Business, Management, and Finance	13-1082, 13-1111, 11- 2000, 11-1020	The Council for Six Sigma Certification	Six Sigma - Sigma White	Recommend
Business, Management, and Finance	13-2011	Wise! Financial Literacy Certification	Wise!-Working in Support of Education	Do Not Recommend
Construction and Development	51-4121	American Welding Society Qualification	American Welding Society	Recommend
Construction and Development	49-9051, 49-2095, 49-9051	Construction and Skilled Trades (CAST) Test	Edison Electric Institute (EEI)	Deferred Recommendation*
Construction and Development	47-2111	IECC Electrical Pre- Apprenticeship	IEC Chesapeake	Recommend
Construction and Development	19-5011, 49-3023, 49-9021, 47-2152, 47-2111, 47-2031, 45-2092, 39-5012, 39-5011, 39-2021, 31-9099, 31-9095, 31-2022	OSHA - 10	Occupational Safety and Health Administration	Do Not Recommend
Construction and Development	49-9051	Electrical Line Worker Program Pre-Apprenticeship Certificate	Utilitrain	Recommend with Reservation*

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Environmental, Agricultural, and Natural Resources	19-1013	BASF Plant Science	BASF (iCEV)	Recommend
Environmental, Agricultural, and Natural Resources	27-1023	Benz School Floral Design Principal	Benz School of Floral Design (iCEV)	Do Not Recommend
Environmental, Agricultural, and Natural Resources	37-3010, 19-1013, 19-1030	Chesapeake Bay Landscape Professional- Associate Credential (CBLP-A)	Chesapeake Bay Landscape Professional (cblpro.org)	Do Not Recommend
Environmental, Agricultural, and Natural Resources	11-3013	Chesapeake Bay Landscape Professional – Level 1	Chesapeake Bay Landscape Professional (cblpro.org)	Do Not Recommend
Environmental, Agricultural, and Natural Resources	19-1031	Ducks Unlimited Ecology Conservation & Mgt Certification	Ducks Unlimited	Recommend with Reservation*
Environmental, Agricultural, and Natural Resources	19-1011, 45-2021, 13- 1021	Elanco Animal Science	Elanco	Recommend
Environmental, Agricultural, and Natural Resources	31-9096	Elanco Vet Medicine	Elanco	Recommend
Environmental, Agricultural, and Natural Resources	51-8031	Water Sampler Certification	Maryland Department of Environment	Do Not Recommend
Environmental, Agricultural, and Natural Resources	39-2021	Principles of Livestock Selection & Evaluation Certification by the National Collegiate Livestock Coaches' Association (NCLA)	National Collegiate Livestock Coaches' Association (NCLCA)	Recommend with Reservation**

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Environmental, Agricultural, and Natural Resources	39-2021	Equine Management & Evaluation Certification from the National Horse Judging Team Coaches' Association (NHJTCA)	National Horse Judging Team Coaches' Association (NHJTCA)	Recommend with Reservation*
Environmental, Agricultural, and Natural Resources	11-9013	Artificial Insemination (Select Sires)	Select Sires	Do Not Recommend
Environmental, Agricultural, and Natural Resources	19-1013	SFMA - Turfgrass Science Certification	Sports Field Management Association	Recommend with Reservation*
Environmental, Agricultural, and Natural Resources	19-1031	NRCS (Natural Resource Conservation Service) Fundamentals of Conservation & Sustainability in Agriculture	United States Department of Agriculture Natural Resources Conservation Service	Recommend
Health and Bioscience	19-4021	Bioscience Core Skills Institute	BCSI Bioscience Core Skills Institute	Deferred Recommendation
Health and Bioscience	39-9031	Certified Personal Trainer (National Strength Professional Association - NSPA)	National Strength Professionals Association (NSPA)	Recommend
Health and Bioscience	31-9091	Assisting National Board: Infection Control	Dental	Recommend with Reservation**

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Human Resource Services, Transportation Technologies	33-3051, 33-2011, 47-3016, 13-1051, 11- 9013	Basic Proficiency Evaluation for Remote Pilot (BPERP) Certificate	Airborne Public Safety Association	Do Not Recommend
Human Resource Services	43-5031, 43-5032	Associations of Public Safety Communication	APCO Public Safety Telecommunicator	Deferred Recommendation
Human Resources Services		FEMA Independent Study	FEMA	Do Not Recommend
Human Resources Services	33-3051	Emergency Telecommunicator	International Academies of Emergency Dispatch	Do Not Recommend
Human Resources Services	33-3051, 33-3012, 33-3021	National Law Enforcement Certification	LAPSEN (Law and Public Safety Education Network)	Recommend
Human Resources Services	43-5031	National Basic 9-1-1 Dispatch Certification	LAPSEN (Law and Public Safety Education Network)	Recommend
Human Resources Services	33-3021, 19-4092	National Basic Crime Scene Investigator	LAPSEN (Law and Public Safety Education Network)	Recommend
Human Resources Services	33-3051, 33-3012, 33-3021	Law and Public Safety Introductory Level Competency	LAPSEN (Law and Public Safety Education Network)	Recommend

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Human Resources Services	33-0000	ICS-100.C (Introduction to the Incident Command System), IS-200.C (Basic Incident Command System for Initial Response), and S-700.B (Introduction to the National Incident Management System)	National Disaster and Emergency Management University - Department of Homeland Security - FEMA	Recommend with Reservation*
Human Resources Services	49-3051	ABYC Marine Service Technician Certification	NOCTI	Recommend
Human Resources Services	11-1021, 43-0000	JROTC Leadership and Employability Skills	NOCTI - JROTC	Do Not Recommend
Human Resources Services	13-1199, 13-1071, 13- 1151	Southwest Airlines Professional Communications Certification	Southwest Airlines	Recommend with Reservation**
Human Resources Services	55-3000	ASVAB - Armed Services Vocational Aptitude Battery	United States Military Entrance Processing Command	Do Not Recommend
Information Technology	15-1240	CompTIA Network+ Certification	CompTIA	Do Not Recommend
Information Technology	15-1230	CompTIA Tech+ Certification	CompTIA	Do Not Recommend
Information Technology	15-1232	Google Cloud Digital Leader Certification	Google	Recommend with Reservation*

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Information Technology	15-1212	Google Cybersecurity Certificate	Google	Recommend with Reservation**
Information Technology	15-1255	Google UX Design Certificate	Google	Recommend with Reservation**
Information Technology	15-2051	Google Data Analytics Professional Certificate	Google	Recommend
Information Technology	15-1212	SOC Operating Analyst I	BCR Cyber	Recommend with Reservation*
Information Technology	15-0000, 17-0000	Certified MATLAB Associate	MathWorks	Do Not Recommend
Information Technology	15-1252	Blockchain+	Web 3 Certification Board Inc.	Do Not Recommend
Information Technology	15-1299	FinTech+	Web 3 Certification Board Inc	Do Not Recommend
Information Technology	15-1299	Miner+	Web 3 Certification Board Inc	Do Not Recommend
Information Technology	15-1257	Web3+	Web 3 Certification Board Inc	Do Not Recommend
Manufacturing, Engineering and Technology	17-0000	Certified Onshape Associate Exam	OnShape	Do Not Recommend
Manufacturing, Engineering and Technology		Pre-Engineering	Robotics Education & Competition Foundation	Do Not Recommend

Career Cluster	IRC Code	Credentialing Name	Issuing Entity	Recommendation
Manufacturing, Engineering and Technology	17-0000, 17-3024, 17-3027, 17-2141	Robotics	Robotics Education & Competition Foundation	Do Not Recommend
Manufacturing, Engineering and Technology	41-4011, 41-4012	Smart Automation Certification Alliance (SACA) Certifications	Smart Automation Certification Alliance (SACA)	Deferred Recommendation
Transportation Technologies	33-3051, 33-2011, 47-3016, 13-1051, 11- 9013	FAA 107 Drone Pilot License	Federal Aviation Administration	Do Not Recommend
Transportation Technologies	49-3023	S/P2 (Safety & Pollution Prevention Training)	S/P2 Safety and Pollution Prevention	Do Not Recommend

^{*} Requires supplemental information from applicant for approval. Deadline is April 1, 2025.

^{**} Prerequisite business rule required from CTE Committee

^{***} See "Deferred Recommendation" definition (Pg. 7)