

**Maryland Career and Technology Education Programs of Study
CCR-CCA of 2013 - Technical Skill Assessment Chart by Career Clusters and Programs of Study**

NOTE: These assessments only apply to students who are completing a State Approved Career and Technology Education (CTE) Program of Study. This document will be updated on an annual basis.

Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information
Arts, Media and Communication (AMC)	Graphic Communications (PrintED)	011001	Introduction to Graphic Communications assessment plus Graphic Design assessment	Students must pass the Introduction to Graphic Communications assessment plus one (1) specialty assessment from the following list: (1) Graphic Design; (2) Digital File Preparation/Digital File Output; (3) Offset Press: Operations/Binding and Finishing; (4) Digital Production and Printing; or (5) Screen Printing Technology	
		011002	Graphic Communication assessment plus Digital File Preparation/Digital File Output assessment		www.gaerf.org
		011003	Graphic Communication assessment plus Offset Press assessment		
		011010	Graphic Communication assessment plus Digital Production and Printing assessment		www.workforcereadysystem.org
		011011	Graphic Communication assessment plus Screen Printing Technology assessment		
		011099	College Credit		Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.
	Interactive Media Production	011005	Adobe Dreamweaver Certification	There are five certifications in Adobe Creative Suite. Students can obtain TSA by passing one of the following exams: Dreamweaver, Illustrator, InDesign, Photoshop or Premiere Pro.	http://www.adobe.com/support/certification/ace_certify.html
		011006	Adobe Illustrator Certification		
		011007	Adobe InDesign Certification		
		011008	Adobe Photoshop Certification		
		011009	Adobe Premiere Pro Certification		
	011099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
	Audiovisual Communication and Broadcast Technologies	011005	Adobe Dreamweaver Certification	There are five certifications in Adobe Creative Suite. Students can obtain TSA by passing one of the following exams: Dreamweaver, Illustrator, InDesign, Photoshop or Premiere Pro.	http://www.adobe.com/support/certification/ace_certify.html
		011006	Adobe Illustrator Certification		
		011007	Adobe InDesign Certification		
		011008	Adobe Photoshop Certification		
		011009	Adobe Premiere Pro Certification		
	011099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		

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Business, Management and Finance (BMF)	Business Management	021007	Institute for the Assessment of the Skills and Knowledge of Business: Entrepreneurship/Management- NEW	The A*S*K Business Institute certification assessment in Entrepreneurship/ Management measures technical skills at the occupational level and includes items which gauge factual and theoretical knowledge. This assessment consists of a written assessment that can be administered in 1, 2 or 3 sessions.	http://www.askinstitute.org
		021002	CLEP Principles of Management Assessment	Depending on the college, students may be eligible to earn college credit with a score of 50 or better on the CLEP exam.	https://clep.collegeboard.org
		021011	AP Microeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021012	AP Macroeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Accounting and Finance	021008	Institute for the Assessment of the Skills and Knowledge of Business: Finance- NEW	The A*S*K Business Institute certification assessment in Finance measures technical skills at the occupational level and includes items which gauge factual and theoretical knowledge. This assessment consists of a written assessment that can be administered in 1, 2 or 3 sessions.	http://www.askinstitute.org
		021003	CLEP Finance and Accounting Assessment	Depending on the college, students may be eligible to earn college credit with a score of 50 or better on the CLEP exam.	https://clep.collegeboard.org
		021011	AP Microeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021012	AP Macroeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home

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		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Finance (NAF)	021006	NAF-Track Certification	NAF-Track Certification includes passing end of course exams, portfolio review, and internship requirements.	naf.org/our-approach/naftack
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Marketing	021009	Institute for the Assessment of the Skills and Knowledge of Business: Fundamental Marketing Concepts- NEW	The A*S*K Business Institute certification assessment in Fundamental Marketing Concepts measures technical skills at the occupational level and includes items which gauge factual and theoretical knowledge. This assessment consists of a written assessment that can be administered in one, two or three sessions.	http://www.askinstitute.org
		021004	CLEP Marketing Assessment	Depending on the college, students may be eligible to earn college credit with a score of 50 or better on the CLEP exam.	https://clep.collegeboard.org
		021011	AP Microeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021012	AP Macroeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
	Business Administrative Services	021010	Institute for the Assessment of the Skills and Knowledge of Business: Fundamental Business Concepts- NEW	The A*S*K Business Institute certification assessment in Fundamental Business Concepts measures technical skills at the occupational level and includes items which gauge factual and theoretical knowledge. This assessment consists of a written assessment that can be administered in 1, 2 or 3 sessions.	http://www.askinstitute.org
		021005	Microsoft Office Specialist Certification	Pass both the Microsoft Office Word and Excel exams to earn the MOS certification	www.microsoft.com/en-us/learning/mos-certification.aspx
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	

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	Management Information Systems	021005	Microsoft Office Specialist Certification	Pass both the Microsoft Office Word and Excel exams to earn the MOS certification	www.microsoft.com/en-us/learning/mos-certification.aspx
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Business Marketing and Marketing Management	021004	CLEP Marketing Assessment	Depending on the college, students may be eligible to earn college credit with a score of 50 or better on the CLEP exam.	https://clep.collegeboard.org
		021011	AP Microeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021012	AP Macroeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Accounting and Business/Finance Services	021003	CLEP Finance and Accounting Assessment	Depending on the college, students may be eligible to earn college credit with a score of 50 or better on the CLEP exam.	https://clep.collegeboard.org
		021011	AP Microeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021012	AP Macroeconomics Exam	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	http://apcentral.collegeboard.com/home
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Business Administration and Management	021005	Microsoft Office Specialist Certification	Pass both the Microsoft Office Word and Excel exams to earn the MOS certification	www.microsoft.com/en-us/learning/mos-certification.aspx

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Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information	
		021002	CLEP Principles of Management Assessment	Depending on the college, students may be eligible to earn college credit with a score of 50 or better on the CLEP exam.	https://clep.collegeboard.org	
		021099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
Construction and Development (CD)	Construction Design and Management	031001	Autodesk AutoCAD Certification	Students are required to pass Autodesk's AutoCAD or Revit certification assessments	www.autodesk.org	
		031002	Autodesk Revit Certification			
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
	Construction Trades Professions: Masonry	031004	Core plus Level 1 Masonry assessment	Pass the National Center for Construction Education and Research (NCCER) – Core: Intro Craft Skills and Level I assessment in the trade area	https://www.nccer.org/workforce-development-programs/credentials-registry	
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.		
	Construction Trades Professions: Carpentry	031005	Core plus Level 1 Carpentry assessment	Pass the National Center for Construction Education and Research (NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry	
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.		
	Construction Trades Professions: Electrical	031006	Core plus Level 1 Electrical assessment	Pass the National Center for Construction Education and Research (NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry	
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.		
			031007	Core plus Level 1 Plumbing assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-

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	Construction Trades Professions: Plumbing				development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.	
	Construction Maintenance Professions: Industrial Maintenance	031008	Core plus Level 1 Industrial Maintenance assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Construction Maintenance Professions: HVAC	031009	Core plus Level 1 HVAC assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Construction Maintenance Professions: Welding	031010	Core plus Level 1 Welding assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Local Construction Trades: Masonry	031004	Core plus Level 1 Masonry assessment	Pass the National Center for Construction Education and Research (NCCER) – Core: Intro Craft Skills and Level I assessment in the trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.	

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	Local Construction Trades: Carpentry	031005	Core plus Level 1 Carpentry assessment	Pass the National Center for Construction Education and Research (NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.	
	Local Construction Trades: Electrical	031006	Core plus Level 1 Electrical assessment	Pass the National Center for Construction Education and Research (NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSA once they have passed course requirements and are eligible to receive college credit.	
	Local Construction Maintenance: Building/Property Maintenance	031008	Core plus Level 1 Industrial Maintenance assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Local Construction Maintenance: HVAC	031009	Core plus Level 1 HVAC assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Local Construction Maintenance: Welding	031010	Core plus Level 1 Welding assessment	Pass the National Center for Construction Education and Research(NCCER) – Core: Intro Craft Skills and Level I assessment in trade area	https://www.nccer.org/workforce-development-programs/credentials-registry
		031099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	

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Consumer Services, Hospitality & Tourism (CSHT)		031011	Certified Welding Certification- SMAW	The AWS Certified Welder program allows students to test to those procedures used in the structural steel, petroleum pipelines, sheet metal and chemical refinery welding industries and demonstrate proficiency with the following processes: (1) Shielded Metal Arc Welding (SMAW), (2) Gas Metal Arc Welding (GMAW), (3) Gas Metal Arc Welding - Short Circuit (GMAW-S), (4) Flux Cored Arc Welding (FCAW).	www.aws.org	
		031012	Certified Welding Certification- GMAW			
		031013	Certified Welding Certification- GMAW-S			
		031014	Certified Welding Certification- FCAW			
	Local Construction Maintenance: Welding		031015	Certified Welding Certification- GTAW	The AWS Certified Welder program allows students to test to those procedures used in the structural steel, petroleum pipelines, sheet metal and chemical refinery welding industries and demonstrate proficiency with the following processes: (5) Gas Tungsten Arc Welding (GTAW), (6) Submerged Arc Welding (SAW), or (7) Brazing.	www.aws.org
			031016	Certified Welding Certification- SAW		
			031017	Certified Welding Certification- BZ		
Careers in Cosmetology		041001	Cosmetology License	The MD State Board of Cosmetology requires students to pass both theory and practical exams to be licensed.	http://www.dlir.state.md.us/license/cos/cosexam.shtml	
Barber/ Hairstylist		041002	Barber License	The MD State Board of Barbers requires students to pass both theory and practical exams to be licensed. (For existing programs only)	http://www.dlir.state.md.us/license/barbers/barbersexam.shtml	
Culinary Arts (ACF)		041004	Certified Fundamentals Cook (CFC) certification	Students are required to pass NOCTI written with at least a 70% and pass NOCTI practical with at least a 75%. Students must take both the written and performance tests.	https://www.acfchefs.org/ACF/Certify/Levels/ACF/Certify/Levels/Students/	
		041005	Certified Fundamentals Pastry Cook (CFPC) certification			
		041099	College Credit			
Baking and Pastry Arts (ACF)		041004	Certified Fundamentals Cook (CFC) certification	Students are required to pass NOCTI written with at least a 70% and pass NOCTI practical with at least a 75%. Students must take both the written and performance tests.	https://www.acfchefs.org/ACF/Certify/Levels/ACF/Certify/Levels/Students/	
		041005	Certified Fundamentals Pastry Cook (CFPC) certification			

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		041099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Food and Beverage Management (ProStart)	041006	National ProStart Certificate of Achievement	Students must pass the Level I and Level II end-of-course exams and complete the 400 hour work-based learning (WBL) requirements.	https://choosere restaurants.org/Programs-and-Scholarships/prostart/ProStart-for-Students
	Hospitality and Tourism Management	041007	Certified Hospitality Tourism Management Professional (CHTMP) certification	To earn the Certified Hospitality Tourism Management Professional (CHTMP), students must pass the end of course assessments for Year 1 and Year 2 courses, complete 100 hour work-based learning (WBL), and complete WBL requirements	https://www.ahlei.org/Programs/High-School-Program-(HTMP)
	Nail Specialist and Manicurist	041003	Nail Technician Certification	MD State Board Nail Technician Theory and Practical Exam administered by PSI. (For existing programs only)	https://www.dlir.state.md.us/license/cos/cos_exam.shtml
	Restaurant, Culinary, and Catering Management	041006	National ProStart Certificate of Achievement	Students must pass the Level I and Level II end-of-course exams and complete the 400 hour work-based learning (WBL) requirements.	https://choosere restaurants.org/Programs-and-Scholarships/prostart/ProStart-for-Students
Environmental, Agricultural & Natural Resources (E.ANR)	Curriculum for Agricultural Sciences Education	051099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	http://www.case4learning.org/
	Horticultural Services	051001	Certified Professional Horticulturalist (CPH) certification	Students are required to pass the Certified Professional Horticulturalist (CPH) assessment.	https://www.mnlga.org/
	Environmental Studies/ Natural Resources	051099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Agricultural Sciences and Operations	051001	Certified Professional Horticulturalist (CPH) certification	Students are required to pass the Certified Professional Horticulturalist (CPH) assessment.	https://www.mnlga.org/
		051099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	

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		071011	Geographic Information System (GIS) certification	Pass the Spatial Technology and Remote Sensing (STARS) assessment to earn the Geographic Information System (GIS) certification.	www.digitalquest.com/certification.html
		071012	ESRI ArcGIS Desktop certification	Pass the ArcGIS Desktop Entry assessment to earn the ESRI ArcGIS Certification.	https://www.esri.com/training/catalog/5823c759f83732d52fa64106/arcgis-desktop-entry-10.5/
	Natural Resources and Conservation	051099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
Health & Biosciences (HB)	Academy of Health Professions - Certified Nursing Assistant	061001	Certified Nursing Assistant (CNA)	Pass the teacher developed Certified Nursing Assistant assessment	http://www.mbon.org/Pages/default.aspx
		061002	Geriatric Nursing Assistant GNA	Pass the National Nurse's Aide Assessment Program (NNAAP) administered through Credential, a subsidiary of Pearson Vue Testing. Students must first hold the CNA certificate in order to be eligible to take the GNA exam	
		061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Health Professions - Pharmacy Technician	061003	Pharmacy Technician Certification - ExCPT exam	Students must pass exam for the Certification of Pharmacy Technicians (ExCPT) through the National Health Careers Association (NHA). To sit for the ExCPT exam students must be within no more than 30 days of successful completion of all requirements needed to obtain a high school diploma.	https://www.nhanow.com/certifications/pharmacy-technician
		061004	Pharmacy Technician Certification - PTCB exam	Students must pass exam for Pharmacy Technician certification through the Pharmacy Technician Certification Board (PTCB). To sit for the PTCB exam, the student must be 18 years of age and a high school graduate.	https://www.ptcb.org/get-certified/apply-for-cpht
		061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	

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	Academy of Health Professions - Dental Assisting	061005	Dental Assisting certification	Pass the Dental Assisting National Board of Radiation Health and Safety (RHS) and the Maryland General Exams (MDG). Certified to expose radiographs and in General Chairside procedures.	https://www.danb.org/Become-Certified/Exams-and-Certifications/CDA.aspx
		061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Health Professions - Clinical Medical Assistant	061006	Certified Clinical Medical Assistant (CCMA) certification	Students must pass the National Healthcareer's CCMA Certification Assessment	https://www.nhanow.com/certifications/clinical-medical-assistant
		061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Health Professions - Physical Rehabilitation	061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Health Professions - Allied Health Other Specialty	061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Health Professions - Allied Health Intern	061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Academy of Health Professions - Dual Enrollment	061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Biomedical Science (PLTW)	061099	College Credit	Students are eligible to earn <u>college credit</u> from PLTW affiliate colleges and universities with a score of 6 or better on any of the end-of-course exams. Students are also eligible to earn up to 8 college credits from Stevenson University for BIO 113, BIO 113L and BIO 222 by doing the following: Completing the program, earning a GPA of 3.0 or higher in all courses, and receiving a score of 7 or better on the PLTW end-of-course assessments.	www.pltw.org

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		061010	Biotechnician Assistant Credentialing Exam (BACE)	The Biotechnician Assistant Credentialing Exam (BACE) is an industry-recognized exam designed to assess core skills and knowledge sets identified by industry, and represented within the academic and performance standards of Biotechnology programs.	http://biotility.research.ufl.edu/bace/
Health Professions/Allied Health Professions and Related Sciences		061001	Certified Nursing Assistant (CNA)	Pass the teacher developed Certified Nursing Assistant assessment	http://www.mbon.org/Pages/default.aspx
		061003	Pharmacy Technician Certification - ExCPT exam	Students must pass exam for the Certification of Pharmacy Technicians (ExCPT) through the National Health Careers Association (NHA). To sit for the ExCPT exam students must be within no more than 30 days of successful completion of all requirements needed to obtain a high school diploma.	https://www.nhanow.com/certifications/pharmacy-technician
		061004	Pharmacy Technician Certification - PTCB exam	Students must pass exam for Pharmacy Technician certification through the Pharmacy Technician Certification Board (PTCB). To sit for the PTCB exam, the student must be 18 years of age and a high school graduate.	https://www.ptcb.org/get-certified/apply-for-cpht
		061005	Dental Assisting certification	Pass the Dental Assisting National Board of Radiation Health and Safety (RHS) and the Maryland General Exams (MDG). Certified to expose radiographs and in General Chairside procedures.	https://www.danb.org/Become-Certified/Exams-and-Certifications/CDA.aspx
		061006	Certified Clinical Medical Assistant (CCMA) certification	Students must pass the National Health Careers CCMA Certification Assessment	https://www.nhanow.com/certifications/clinical-medical-assistant
		061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Biotechnology		061099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.

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	Biotechnology	061010	Biotechnician Assistant Credentialing Exam (BACE)	The Biotechnician Assistant Credentialing Exam (BACE) is an industry-recognized exam designed to assess core skills and knowledge sets identified by industry, and represented within the academic and performance standards of Biotechnology programs.	http://biotility.research.ufl.edu/bace/
Human Resource Services (HRS)	Fire, and Emergency Medical Training/ High School Cadet (MFRI)	071001	Emergency Medical Technician (EMT) certification	Student must pass one of the following assessments: (1) EMT, (2) EMR, (3) Fire Fighter I, (4) Firefighter II (must pass Firefighter I first), (5) Truck Company Fireground Operations, (6) Rescue Tech – Site Operations, (7) Rescue Technician – Vehicle and Machinery Extrication, and/or (8) Haz-Mat Operations	www.mfri.org
		071002	Emergency Medical Responder (EMT) certification		
		071003	Fire Fighter I certification		
		071004	Fire Fighter II certification		
		071005	Truck Company Fireground Ops certification		
		071006	Rescue Tech - Site Ops certification		
		071007	Rescue Tech - Vehicle and Machinery Extraction certification		
		071008	Hazardous Material Operations certification		
		071099	College credit		
	Teacher Academy of Maryland	071009	ParaPro	Student must achieve a minimum score of 455 on ParaPro exam	https://www.ets.org/p/arapro
		071010	PraxisCORE	Student must achieve passing scores in Reading - 156, Writing - 162, and Math - 150	https://www.ets.org/praxis/
		071099	College credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
			071011	Geographic Information System (GIS) certification	Pass the Spatial Technology and Remote Sensing (STARS) assessment to earn the Geographic Information System (GIS) certification.

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Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information
	Homeland Security & Emergency Preparedness – Information/ Communications Technology	071012	ESRI ArcGIS Desktop certification	Pass the ArcGIS Desktop Entry assessment to earn the ESRI ArcGIS Certification.	https://www.esri.com/training/catalog/5823c759f83732d52fa64106/arccgis-desktop-entry-10.5/
	Homeland Security & Emergency Preparedness - Homeland Security Sciences	071099	College credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Homeland Security & Emergency Preparedness - Criminal Justice/Law Enforcement Pathway	071099	College credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Criminal Justice, Law and Society	071099	College credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Early Childhood Education/Child Care	071013	Child Development Associate certification	Candidates do not receive a pass or fail score on the CDA Exam and Verification Visit. Rather, the Council for Professional Recognition comprehensively evaluates how candidates score in each of the thirteen CDA Functional Areas on the CDA Exam and the CDA Verification Visit to make a credentialing decision	http://www.cdacouncil.org/about/cda-credential
		071014	90 Hour Certificate	Students must complete 90 hours of Early Childhood courses (Child Growth and Development & Methods and Materials) and earn a grade of "B" or better.	
Information Technology (IT)	Database Academy (Oracle) - Java Programming	081002	Java Foundations Certified Junior Associate certification	Students must pass either the Java Foundations Certified Junior Associate exam or Database Foundations Junior Associate exam	https://academy.oracle.com/en/oa-web-overview.html

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	Database Academy (Oracle) - Database Management	081003	Database Foundations Junior Associate certification	Students must pass either the Java Foundations Certified Junior Associate exam or Database Foundations Junior Associate exam	https://academy.oracle.com/en/oa-web-overview.html
	Computer Science (PLTW)	081020	AP Computer Science Principles	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	https://apstudent.collegeboard.org/apcourse
081021		AP Computer Science A	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	https://apstudent.collegeboard.org/apcourse	
081099		College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
	IT Networking Academy CISCO - CCENT	081004	CompTIA ITF	Students are required to pass one or more of the following: (1) CompTIA ITF, (2) CompTIA A+, (3) CompTIA Network+, (4) Cisco CCT, (5) Cisco CCENT, (6) Cisco CCNA RS, (7) Cisco CCNA Security, (8) CompTIA Security+, (9) NDG Linux Essentials, (10) CompTIA Linux+, (11) Cisco CCNA Cyber Ops, (12) CompTIA PenTest+	https://www.netacad.com/careers/certifications/ http://partners.comptia.org
081005		CompTIA A+			
081006		CompTIA Network+			
081007		CompTIA Security+			
081008		CompTIA PenTest+			
081009		CompTIA Linux+			
081010		LPI Linux Essentials			
081011		Cisco CCT			
081012		Cisco CCENT			
081013		Cisco CCNA RS			
081014		Cisco CCNA Security			
081015	Cisco CCNA Cyber Ops				
		081099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	IT Networking Academy CISCO - CCNA Routing and Switching	081004	CompTIA ITF	Students are required to pass one or more of the following: (1) CompTIA ITF, (2) CompTIA A+, (3) CompTIA Network+, (4) Cisco CCT, (5) Cisco CCENT, (6) Cisco CCNA RS, (7) Cisco CCNA Security, (8) CompTIA Security+, (9) NDG Linux Essentials, (10) CompTIA Linux+, (11) Cisco CCNA Cyber Ops, (12) CompTIA PenTest+	https://www.netacad.com/careers/certifications/
081005		CompTIA A+			
081006		CompTIA Network+			
081007		CompTIA Security+			
081008		CompTIA PenTest+			
081009		CompTIA Linux+			

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Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information
		081010	LPI Linux Essentials		http://partners.comptia.org
		081011	Cisco CCT		
		081012	Cisco CCENT		
		081013	Cisco CCNA RS		
		081014	Cisco CCNA Security		
		081015	Cisco CCNA Cyber Ops		
	IT Networking Academy CISCO - CCNA Routing and Switching	081099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	IT Networking Academy CISCO - CCNA Security	081004	CompTIA ITF	Students are required to pass one or more of the following: (1) CompTIA ITF, (2) CompTIA A+, (3) CompTIA Network+, (4) Cisco CCT, (5) Cisco CCENT, (6) Cisco CCNA RS, (7) Cisco CCNA Security, (8) CompTIA Security+, (9) NDG Linux Essentials, (10) CompTIA Linux+, (11) Cisco CCNA Cyber Ops, (12) CompTIA PenTest+	https://www.netacad.com/careers/certifications/ http://partners.comptia.org
		081005	CompTIA A+		
		081006	CompTIA Network+		
		081007	CompTIA Security+		
		081008	CompTIA PenTest+		
		081009	CompTIA Linux+		
		081010	LPI Linux Essentials		
		081011	Cisco CCT		
		081012	Cisco CCENT		
		081013	Cisco CCNA RS		
		081014	Cisco CCNA Security		
		081015	Cisco CCNA Cyber Ops		
		081099	College Credit		
IT Networking Academy CISCO - CCNA Cyber Ops		081004	CompTIA ITF		
	081005	CompTIA A+			
	081006	CompTIA Network+			
	081007	CompTIA Security+			
	081008	CompTIA PenTest+			
	081009	CompTIA Linux+			
	081010	LPI Linux Essentials			
	081011	Cisco CCT			
081012	Cisco CCENT				

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Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information		
		081013	Cisco CCNA RS				
		081014	Cisco CCNA Security				
		081015	Cisco CCNA Cyber Ops				
		081099	College Credit			Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Computer and Information Sciences		081001	NAF-Track Certification	NAF-Track Certification includes passing end of course exams, portfolio review, and internship requirements.	naf.org/our-approach/nastrack	
			081004	CompTIA ITF	Students are required to pass one or more of the following: (1) CompTIA ITF, (2) CompTIA A+, (3) CompTIA Network+, (4) Cisco CCT, (5) Cisco CCENT, (6) Cisco CCNA RS, (7) Cisco CCNA Security, (8) CompTIA Security+, (9) NDG Linux Essentials, (10) CompTIA Linux+, (11) Cisco CCNA Cyber Ops, (12) CompTIA PenTest+	https://www.netacad.com/careers/certifications/	
			081005	CompTIA A+			
			081006	CompTIA Network+			
			081007	CompTIA Security+			http://partners.comptia.org
			081008	CompTIA PenTest+			
			081009	CompTIA Linux+			
			081010	LPI Linux Essentials			
			081020	AP Computer Science Principles			Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.
			081021	AP Computer Science A	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	https://apstudent.collegeboard.org/apcourse	
			081099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
Manufacturing, Engineering	Pre-Engineering (PTLW)	031001	Autodesk AutoCAD Certification	Students are required to pass Autodesk's AutoCAD or Revit certification assessments	www.autodesk.org		
		031002	Autodesk Revit Certification				
		081020	AP Computer Science Principles	Depending on the college, students may be eligible to earn college credit with a score of 3 or better on the AP exam.	https://apstudent.collegeboard.org/apcourse		

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		091099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Manufacturing Engineering Technology (NIMS) - Machining Operations	091002	Job Planning, Benchwork & Layout certification with Measurement, Materials & Safety exam	Students pass the Measurement, Materials & Safety exam and one of the following: (1) Job Planning, Benchwork & Layout, (2) Manual Milling Skills I, (3) Turning Operations: Turning Between Centers, (4) Turning Operations: Turning Chucking Skills, (5) Grinding Skills I, (6) Drill Press Skills I, (7) CNC Turning: Programming Setup & Operations, (8) CNC Milling: Programming Setup & Operations, (9) CNC Turning: Operations, (10) CNC Milling: Operations	https://www.nims-skills.org/web/nims/home
091003		Manual Milling Skills I certification with Measurement, Materials & Safety exam			
091004		Turning Operations: Turning Between Centers certification with Measurement, Materials & Safety exam			
	Manufacturing Engineering Technology (NIMS) - Machining Operations	091005	NIMS Turning Operations: Turning Chucking Skills certification with Measurement, Materials & Safety exam	Students pass the Measurement, Materials & Safety exam and one of the following: (1) Job Planning, Benchwork & Layout, (2) Manual Milling Skills I, (3) Turning Operations: Turning Between Centers, (4) Turning Operations: Turning Chucking Skills, (5) Grinding Skills I, (6) Drill Press Skills I, (7) CNC Turning: Programming Setup & Operations, (8) CNC Milling: Programming Setup & Operations, (9) CNC Turning: Operations, (10) CNC Milling: Operations	https://www.nims-skills.org/web/nims/home
091006		NIMS Grinding Skills I certification with Measurement, Materials & Safety exam			
091007		NIMS Drill Press Skills I certification with Measurement, Materials & Safety exam			
091008		NIMS CNC Turning: Programming Setup & Operations certification with Measurement, Materials & Safety exam			
091009		NIMS CNC Milling: Pgm Setup & Operations certification with Measurement, Materials & Safety exam			
091010		NIMS CNC Turning: Operations certification with Measurement, Materials & Safety exam			
091011		NIMS CNC Milling: Operations certification with Measurement, Materials & Safety exam			
		091099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Manufacturing Engineering Technology (NIMS) - CNC Programming and Operations	091002	Job Planning, Benchwork & Layout certification with Measurement, Materials & Safety exam	Students pass the Measurement, Materials & Safety exam and one of the following: (1) Job Planning, Benchwork & Layout, (2) Manual Milling Skills I, (3) Turning Operations: Turning Between Centers, (4) Turning Operations: Turning Chucking Skills, (5) Grinding Skills I, (6) Drill Press Skills I, (7) CNC Turning: Programming Setup & Operations, (8) CNC Milling: Programming Setup & Operations, (9) CNC Turning: Operations, (10) CNC Milling: Operations	https://www.nims-skills.org/web/nims/home
091003		Manual Milling Skills I certification with Measurement, Materials & Safety exam			
091004		Turning Operations: Turning Between Centers certification with Measurement, Materials & Safety exam			

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Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information
		091005	NIMS Turning Operations: Turning Chucking Skills certification with Measurement, Materials & Safety exam		
		091006	NIMS Grinding Skills I certification with Measurement, Materials & Safety exam		
		091007	NIMS Drill Press Skills I certification with Measurement, Materials & Safety exam		
	Manufacturing Engineering Technology (NIMS) - CNC Programming and Operations	091008	NIMS CNC Turning: Programming Setup & Operations certification with Measurement, Materials & Safety exam	Students pass the Measurement, Materials & Safety exam and one of the following: (1) Job Planning, Benchwork & Layout, (2) Manual Milling Skills I, (3) Turning Operations: Turning Between Centers, (4) Turning Operations: Turning Chucking Skills, (5) Grinding Skills I, (6) Drill Press Skills I, (7) CNC Turning: Programming Setup & Operations, (8) CNC Milling: Programming Setup & Operations, (9) CNC Turning: Operations, (10) CNC Milling: Operations	https://www.nims-skills.org/web/nims/home
		091009	NIMS CNC Milling: Pgm Setup & Operations certification with Measurement, Materials & Safety exam		
		091010	NIMS CNC Turning: Operations certification with Measurement, Materials & Safety exam		
		091011	NIMS CNC Milling: Operations certification with Measurement, Materials & Safety exam		
		091099	College Credit		
	Manufacturing Engineering Technology (NIMS) - Multi-System Operations	091002	Job Planning, Benchwork & Layout certification with Measurement, Materials & Safety exam	Students pass the Measurement, Materials & Safety exam and one of the following: (1) Job Planning, Benchwork & Layout, (2) Manual Milling Skills I, (3) Turning Operations: Turning Between Centers, (4) Turning Operations: Turning Chucking Skills, (5) Grinding Skills I, (6) Drill Press Skills I, (7) CNC Turning: Programming Setup & Operations, (8) CNC Milling: Programming Setup & Operations, (9) CNC Turning: Operations, (10) CNC Milling: Operations	https://www.nims-skills.org/web/nims/home
		091003	Manual Milling Skills I certification with Measurement, Materials & Safety exam		
		091004	Turning Operations: Turning Between Centers certification with Measurement, Materials & Safety exam		
		091005	NIMS Turning Operations: Turning Chucking Skills certification with Measurement, Materials & Safety exam		

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Career Cluster	CTE Program of Study	TSA Codes	Technical Skill Assessment	Specific Criteria	Websites for Additional Information		
Manufacturing, Engineering & Technology (MET)		091006	NIMS Grinding Skills I certification with Measurement, Materials & Safety exam	Students pass the Measurement, Materials & Safety exam and one of the following: (1) Job Planning, Benchwork & Layout, (2) Manual Milling Skills I, (3) Turning Operations: Turning Between Centers, (4) Turning Operations: Turning Chucking Skills, (5) Grinding Skills I, (6) Drill Press Skills I, (7) CNC Turning: Programming Setup & Operations, (8) CNC Milling: Programming Setup & Operations, (9) CNC Turning: Operations, (10) CNC Milling: Operations Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	https://www.nims-skills.org/web/nims/home		
		091007	NIMS Drill Press Skills I certification with Measurement, Materials & Safety exam				
	Manufacturing Engineering Technology (NIMS) - Multi-System Operations	091008	NIMS CNC Turning: Programming Setup & Operations certification with Measurement, Materials & Safety exam				
		091009	NIMS CNC Milling: Pgm Setup & Operations certification with Measurement, Materials & Safety exam				
		091010	NIMS CNC Turning: Operations certification with Measurement, Materials & Safety exam				
		091011	NIMS CNC Milling: Operations certification with Measurement, Materials & Safety exam				
		091099	College Credit				
	Drafting and Design Technology	031011	ADDA Apprentice Drafter Exam			An ADDA Apprentice Drafting Credential is the first step in an industry credentialing system that is based on an individual's knowledge and skills needed to understand essential manual and CAD drafting skills. The exam is basic drafting knowledge and not software specific.	
		031001	Autodesk AutoCAD Certification			Students are required to pass Autodesk's AutoCAD or Revit certification assessments	www.autodesk.org
		031002	Autodesk Revit Certification				
		031099	College Credit			Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Manufacturing Engineering Technology (MSSC)	091012	Quality Practices & Measurement with Safety exam (MSSC)			Students must pass the Safety exam and one of the following: (1) Quality Practices & Measurement (2) Manufacturing Processes & Production, (3) Maintenance Awareness	https://www.msscusa.org/certification/

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		091013	Manufacturing Processes & Production with Safety exam (MSSC)		
		091014	Maintenance Awareness with Safety exam (MSSC)		
Transportation Technologies (TT)	Automotive Technology Maintenance and Light Repair- Plus (NATEF)	101001	Suspension and Steering student certification	Pass one of the following ASE Student Certification exams: (1) Suspension and Steering, (2) Brakes, (3) Electrical/ Electronic Systems, (4) Engine Performance, (5) Engine Repair, (6) Automatic Transmission/ Transaxle, (7) Manual Drive Train and Axles, OR (8) Heating and Air Conditioning. Developed by ASE in partnership with AYES, NATEF, and SkillsUSA	https://www.ase.com/Tests/ASE-Certification-Tests.aspx
		101002	Brakes student certification		
		101003	Electrical/ Electronic Systems student certification		
		101004	Engine Performance student certification		
		101005	Engine Repair student certification		
		101006	Automatic Transmission/Transaxle student certification		
		101007	Manual Drive Train and Axles student certification		
		101008	Heating and Air Conditioning student certification		
		101009	Maintenance and Light Repair student certification		
	101099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
	Autobody/Collision Repair Technician	101010	Painting and Refinishing student certification	Pass one of the following ASE Student Certification exams: (1) Painting and Refinishing OR (2) Structural Analysis and Damage Repair. Developed by ASE in partnership with AYES, NATEF, and SkillsUSA.	https://www.ase.com/Tests/ASE-Certification-Tests.aspx
101011		Structural Analysis and Damage Repair student certification			
101012		I-CAR Platinum Certificate			

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		101099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Medium/Heavy Truck Technician- Diesel (NATEF)	101013	Diesel Engines student certification	Pass one of the following ASE Student Certification exams: (1) Diesel Engines, (2) Electrical/Electronic Systems, (3) Brakes, (4) Suspension and Steering. Developed by ASE in partnership with AYES, NATEF, and SkillsUSA.	https://www.ase.com/Tests/ASE-Certification-Tests.aspx
101003		Electrical/Electronic Systems student certification			
101002		Brakes student certification			
101001		Suspension and Steering student certification			
101099		College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.		
	Marine Maintenance and Repair Technologies	101018	NOCTI - ABYC certification in Marine Service Technology Fundamentals	The American Boat and Yacht Council (ABYC) certification in Marine Service Technology Fundamentals is a NOCTI developed certification exam in partnership with ABYC based on ABYC curriculum that covers over 240 hrs of content.	https://nocti.org/ABYC.cfm
	Transportation Logistics and Management	101099	College Credit	Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	
	Automotive Maintenance and Repair Technologies	101001	Suspension and Steering student certification	Pass one of the following ASE Student Certification exams: (1) Suspension and Steering, (2) Brakes, (3) Electrical/ Electronic Systems, (4) Engine Performance, (5) Engine Repair, (6) Automatic Transmission/ Transaxle, (7) Manual Drive Train and Axles, (8) Heating and Air Conditioning, (9) Maintenance and Light Repair, (10) Painting and Refinishing, (11) Structural Analysis and Damage Repair, or (12) Diesel Engines. Developed by ASE in partnership with AYES, NATEF, and SkillsUSA	https://www.ase.com/Tests/ASE-Certification-Tests.aspx
101002		Brakes student certification			
101003		Electrical/ Electronic Systems student certification			

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		101004	Engine Performance student certification				
		101005	Engine Repair student certification				
		101006	Automatic Transmission/Transaxle student certification	Pass one of the following ASE Student Certification exams: (1) Suspension and Steering, (2) Brakes, (3) Electrical/ Electronic Systems, (4) Engine Performance, (5) Engine Repair, (6) Automatic Transmission/ Transaxle, (7) Manual Drive Train and Axles, (8) Heating and Air Conditioning, (9) Maintenance and Light Repair, (10) Painting and Refinishing, (11) Structural Analysis and Damage Repair, or (12) Diesel Engines. Developed by ASE in partnership with AYES, NATEF, and SkillsUSA	https://www.ase.com/Tests/ASE-Certification-Tests.aspx		
		101007	Manual Drive Train and Axles student certification				
		101008	Heating and Air Conditioning student certification				
		101009	Maintenance and Light Repair student certification				
		101010	Painting and Refinishing student certification				
		101011	Structural Analysis and Damage Repair student certification				
		101013	Diesel Engines student certification				
		101012	I-CAR Platinum Certificate			www.i-car.com/Home/Educational-Programs	
		101099	College Credit			Based on articulation agreements and dual enrollment options in the program, students can obtain TSAs once they have passed course requirements and are eligible to receive college credit.	