**Arizona Department of Education**

Arizona Career & Technical Education Quality Commission

AGENDA
January 24, 2024

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*The Arizona Career and Technical Education Quality Commission (ACTEQC), in collaboration with the Arizona Department of Education, is a responsible authority for approving the Technical Standards and the Technical Skills Assessment for CTE programs as set fo15098rth by Arizona state statute, federal funding (ADE CTE Perkins Plan) and the State CTE Plan.*

1. Welcome and Introductions

2. Overview of Membership (Voting and Non-voting Membership, Commission Representation)

3. Call to the Public - Comments (3-minute limit)

4. Discussion and Adoption of new technical standards for Automotive Collision Repair

5. Discussion and Adoption of new technical standards for Diesel Engine Repair

6. Discussion and Adoption of new technical standards for Fashion Design and Operations

7. Discuss and Endorsement of Legislative Proposals

8. Call to the Public - Comments - Consideration of Future Agenda Items (3-minute limit)

9. Adjourn

# ARIZONA CAREER AND TECHNICAL EDUCATION QUALITY COMMISSION

## ORGANIZATIONAL STRUCTURE GUIDELINES

<u>Statement of Purpose</u>:

The Arizona Career and Technical Education Quality Commission (ACTEQC), in collaboration with the Arizona Department of Education, is a responsible authority for approving the CTE Technical Standards and the Technical Skills Assessment for CTE programs.

Using their expertise, members of the commission meet regularly to confirm and approve the career and technical education standards. The standards contain the knowledge and essential skills students must possess to complete a career and technical education program. To ensure students, possess the knowledge of and can demonstrate the use of essential skills identified in the standards, the commissioners also confirm and approve the technical skills assessments based on the content of each program's standards. Commissioners also serve as advocates and support Career and Technical Education by providing their expertise in setting direction by giving input in strategic planning.

The purpose of the Arizona Career and Technical Education Quality Commission (ACTEQC), as required by state statute, federal funding (ADE CTE Perkins Plan), and the State CTE Plan, is to provide business, industry, and CTE stakeholders an opportunity:

(1) to continue to engage Arizona business and industry employers and to work with existing community, state, and national organizations in support of high-quality, relevant CTE programs; and

(2) to confirm and approve CTE technical standards essential to students' education and career success; and

(3) to confirm and approve students' skill attainment through end-of-program assessments; and

(4) to confirm and approve industry credentials; and

(5) to confirm and approve regional labor market data provided by the Arizona Office of Economic Opportunity on an annual basis.

<u>Membership Composition</u>

Nominees shall be submitted to the State Superintendent for Public Instruction for official appointment.

Membership on the Arizona Career and Technical Education Quality Commission shall consist of an individual representing large and small businesses and industries and the geographic and demographic diversity of the state with at-least one of the following constituencies:

- Representative of each of the career clusters.
  a) Agriculture, Food & Natural Resources
  b) Architecture & Construction
  c) Audio/Video Technology & Communications
  d) Business Management & Administration
  e) Education & Training
  f) Health Science and Human Services
  g) Hospitality & Tourism

h)  Information Technology
i)  Law, Public Safety, Corrections & Security
j)  Manufacturing and Engineering
k)  Transportation, Distribution & Logistics

- A Secondary School District
- A CTED (individual to be nominated by the CTED Superintendents' Consortium)
- Two (2) Community College Representatives [to be nominated from among the Presidents' Council or AOAC if so, designated by the presidents. One (1) member should represent the rural population and one (1) should represent the urban population.]
- A University Representative (rotation is every third year by the universities recognized by the Board of Regents)
- An Educational Advocacy Representative from the Arizona Education Association
- A Representative of the Association of Career and Technical Education of Arizona (AZACTEAZ)
- ADE/CTE Staff to include the Director of Career and Technical Education for ADE/CTE or designee(s).

One (1) Co-Chair of the Commission shall be the State Superintendent of Public Instruction or their designee. And, and one (1) Co-Chair shall represent business/industry.

ACTEQC Member Selection and Vacancies

A candidate for a vacancy shall be filled with the same membership composition type as the individual leaving the Commission.

Members of the Commission can recommend a replacement.

Length of Service/Term

The term of each member is four (4) years. In May of each year, Commission members will confirm their continuation to remain on the Commission and their commitment to the purpose of the Commission.

Recorder

ADE/CTE staff, or their designee, will serve as the recorder of meeting minutes. Minutes shall be sent to all Commission members within 30 days after said meeting. Minutes shall be reviewed and accepted by the Commission at its next regular scheduled meeting.

Voting

Every Commission member shall be entitled to vote. All voting decisions shall be determined by majority vote of the members present. No proxy representation will be recognized.

Meetings and Committees

The Commission shall have a minimum of three (3) meetings per calendar year.

Time and location of the meetings (Commission and ad hoc committees) shall be decided by the Chair, in consultation with ADE/CTE Staff. Ad hoc committees may be formed throughout the year, consisting of selected members of the commission. Committee meetings may be called by the Chair or a majority of the Commission. There shall be one Annual Meeting, which shall be the first meeting of a new school year.

Electronic or telephonic presence at a meeting will be recognized as physically being present (NOTE: July 16, 2023, there will not be an electronic or telephonic option for attendance).

Written Notice

ADE/CTE, or their designee, in consultation with the Commission Chair, shall issue written notice of the date, time, and location of all scheduled meetings. A draft meeting agenda shall be included with this notice.
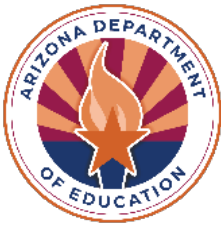
# Arizona Career and Technical Education Program Standards

*presented to the Arizona Career and Technical Education Quality Commission for their endorsement on January 24, 2024*

## Dear Commissioners:

This document includes the new technical standards for these CTE program: **Automotive Collision Repair, Diesel Engine Repair, and Fashion Design and Operations**. Please review these standards and be prepared to give them your endorsement at the Commission meeting on January 24.  What technical standards are and how they are developed and approved are explained below.  This is followed by the committees involved in developing the standards and the finalized standards.

**What are industry-validated technical standards?** Technical standards are knowledge and skill statements about practices and processes used in design, manufacture, installation, and engagement of a material, product, or assembly, and as well, those practices and processes related to the development, management, and provision of services. Technical standards represent the entry-level performance of work. When available and appropriate, technical standards are aligned with nationally recognized standards and industry certifications.

**How are technical standards developed?** A Standards Validation Committee may include incumbent workers and/or their supervisors, secondary CTE instructors, community college instructors, and the CTE Program Specialist. The committee meets with a trained facilitator to identify and validate the knowledge and skills necessary to perform the work. Once assembled, the standards are presented to the Arizona Career and Technical Education Quality Commission for their endorsement. Once approved, they are disseminated to teachers.

**About the Automotive Collision Repair Committee (see standards starting on page 3)**

Every 3 years, a Panel of ASE Industry Partners reviews and updates ASE tasks and standards, tool and equipment lists with the Collision Industry. This panel includes such members as the Inter-Industry Conference on Auto Collision Repair (I-CAR), Like Kind and Quality (LKQ), Collision Repair Education Foundation, Auto Care Alliance, and Tech Force Foundation. The ADE Standards Validation Committee aligned the updated ASE work with Arizona's Automotive Collision Repair standards and made necessary adjustments and changes. Members of this committee included:

- Michael Terrey, *AADA Education Director, ASE Education Foundation, Field Manager*
- Mike Coley, *ASE Education Foundation, President*
- Dave Cappert, *ASE Education Foundation, Campus Administrator*
- George Arrants , *ASE Education Foundation, Vice President*
- Cathy Reed. *Technical Skills Assessments Program Specialist,* ADE/CTE
- Jason Wojcik, *Public Service Careers, Transportation Technologies Program Specialist*, ADE/CTE

**About the Diesel Engine Repair Committee (see standards starting on page 6)**

The ASE Medium/Heavy Truck Program tasks and standards and tool and equipment lists were reviewed and updated by a review panel consisting of representatives from Ryder, Ford, International, Isuzu, Volvo, UPS, TA Truck Service, Penske, and Daimler Truck of North America. Mike Terrey from ASE and Cathy Reed from ADE cross-walked the ASE tasks and standards, tool and equipment lists with the current ADE Diesel Engine Repair standards. The changes were minor and after a discussion with Mike, Jason, and teacher Steven Bernasek, it was determined that a formal committee was not needed. The working committee consisted of—

- Michael Terrey, *AADA Education Director, ASE Education Foundation Field Manager*
- Cathy Reed, *Technical Standards, Technical Skills Assessments Program Specialist*, ADE/CTE

- Jason Wojcik, *Public Service Careers, Transportation Technologies Program Specialist*, *ADE/CTE*
- Steven Bernasek (teacher review), EVIT East Valley Institute of Technology
- Paul Sweeney (teacher review), Santa Rita High School , Tucson Unified District

## About the Fashion Design and Operations Committee (see standards starting on page 11)

The ADE Fashion Design and Merchandising standards had not been reviewed since 2016. In order to determine what was needed for this program with regards to skills, knowledge, tools, and equipment, an in-depth review of the occupational area was conducted. Research included a study of the trends, tools and equipment, jobs and qualification of workers, and as well, interviews with individuals currently working in the industry were conducted.  Once an updated list of standards and measurements was drafted, a committee of the following individuals were convened to review, edit, and add to the draft standards:

- Karen Lukacs, *Owner-Designer*, *Karen Lukacs Textiles*
- Gale Beauchamp, *Director of Industry and Education*, *Office of Maricopa County School Superintendent*
- Maggie Keef, *Associate Professor of Practice, Fashion Industry's Science and Technology, Norton School of Human Ecology, University of Arizona*
- Brian Hill, *Executive Director Phoenix Fashion Week*
- Asher Sinclaire, *Digital Eco-Artist*
- Cara Summerfield (teacher), *Gilbert Unified District*
- Merry Pors (teacher), *Centennial High School, Peoria Unified School District*
- Cathy Reed**,** *Technical Standards, Technical Skills Assessments Program Specialist***,** *ADECTE*
- Kylie Chamblee, *Education and Training, Family and Consumer Science Program Specialist*, *ADE/CTE*

Once the standards and measurements were updated and reviewed, it was recommended that the title of this program be changed to Fashion Design and Operations. This updated program will prepare students to apply artistic principles and techniques to the professional design of commercial fashions, apparel, and accessories, and the management of fashion development projects. It includes instruction in apparel design; accessory design; the design of men's, women's, and children's wear; flat pattern design; computer-assisted design and manufacturing; concept planning; designing in specific materials; labor and cost analysis; history of fashion; fabric art and printing; and the principles of management and operations in the fashion industry.

**For questions about the standards, please contact Judy Balogh at 602-542-4155 or judy.balogh@azed.gov.**

# AUTOMOTIVE COLLISION REPAIR 47.0600.30 TECHNICAL STANDARDS

An Industry Technical Standards Validation Committee updated the program technical standards by aligning them to the recently updated Automotive Service Excellence (ASE) Task and Standards List and the Tool and Equipment Lists. Students completing the program are then eligible to earn the ASE Certification. The Arizona Career and Technical Education Quality Commission, the validating authority for the Arizona Skills Standards Assessment System, endorsed these standards on January 24, 2024.

Note: Arizona's Professional Skills are taught as an integral part of the Automotive Collision Repair program.

**The Technical Skills Assessment for Automotive Collision Repair is available SY2024-2025.**

Note: In this document i.e. explains or clarifies the content and e.g. provides examples of the content that must be taught.

## STANDARD 1.0 PERFORM NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR

1.1 Use proper personal safety equipment and take necessary precautions with hazardous operations and materials in accordance with federal, state, and local regulations

1.2 Use OEM (Original Equipment Manufacturer/Manufacturing) procedures to identify material and composition of the vehicle being repaired (i.e., mid steel, high strength steel, ultra-high strength steel, aluminum, composites, carbon fiber, etc.)

1.3 Use procedures and precautions that apply to the vehicle being repaired

1.4 Identify vehicle system precautions and/or inspections and recommended procedure before inspecting or replacing components [i.e., supplemental restraint system (SRS), advanced driver assistance systems (ADAS), hybrid/electric/alternative fuel vehicles, locations, etc.]

1.5 Perform vehicle clean-up; complete quality control using a checklist on operations performed (e.g., review estimate and develop a repair plan; secure and store any items in the repair area; remove necessary trim and panels for repair, and bag and tag hardware; vacuum glass from doors, quarters, and floors; and wipe clean any materials on panels and interior parts)

1.6 Review damage report and analyze damage to determine appropriate methods for overall repair and develop and document a repair plan

1.7 Inspect, remove, protect, label, store, inventory, and reinstall exterior trim and moldings

1.8 Inspect, remove, protect, label, store, inventory, and reinstall interior trim and components

1.9 Inspect, remove, protect, label, store, inventory, and reinstall body panels and components that may interfere with or be damaged during repair

1.10 Inspect, remove, protect label, store, inventory, and reinstall vehicle mechanical and electrical components that may interfere with or be damaged during repair

1.11 Protect panels, glass, interior parts, and other vehicles adjacent to the repair area

1.12 Wash entire vehicle with soap and water and complete pre-repair inspection checklist (e.g., secure and store any items in the way of vehicle repair; remove and store any item removed for repair; bag and tag any hardware for easy reassembly; wash vehicle with soap and water; and cover any adjacent panels, glass, and trim to protect from damage during repair)

1.13 Prepare damaged area using water-based and solvent-based cleaners

1.14 Remove corrosion protection, undercoating, sealers, and other protective coatings as necessary to perform repairs

1.15 Inspect, remove, and reinstall repairable plastics and other components for off-vehicle repair

## STANDARD 2.0 PERFORM OUTER BODY PANEL REPAIRS, REPLACEMENTS, AND ADJUSTMENTS

2.1 Inspect, remove, replace, and align hood, hood hinges, and hood latch

2.2 Inspect, remove, replace, and align deck lid, lid hinges, and lid latch

2.3 Inspect, remove, replace, and align doors, latches, hinges, and related hardware

2.4 Inspect, remove, replace, and align tailgates, hatches, liftgates, and sliding doors

2.5 Inspect, remove, replace, overhaul, and align bumpers, covers, reinforcement, guards, impact absorbers, and mounting hardware

2.6 Inspect, remove, replace, and align fenders, and related panels

2.7 Restore corrosion protection during and after the repair

2.8 Replace seam sealer to match OEM appearance

2.9 Restore sound deadeners and foam materials

2.10 Identify one-time use fasteners

2.11 Inspect, identify labels/decals, and replace as necessary

2.12 Follow manufacture guidelines when applying heat to non-structural components during repair

## STANDARD 3.0 PERFORM METAL FINISHING AND BODY FILLING

3.1 Prepare a panel for body filler by abrading or removing the coatings; featheredge, refine scratches, and clean the surface before the application of body filler

3.2 Locate and repair surface irregularities and straighten contours on a damaged body panel using power tools, hand tools, and weld-on pulling attachments

3.3 Demonstrate hammer and dolly techniques

3.4 Heat shrink stretched panel areas to proper contour

3.5 Cold shrink stretched panel areas to proper contour

3.6 Identify body filler defects and correct the cause and conditions (i.e., pinholing, ghosting, staining, over catalyzing, etc.)

3.7 Identify different types of body fillers

3.8 Shape body filler to contour and finish sanding

3.9 Perform proper metal finishing techniques for aluminum

3.10 Perform proper application of body filler to aluminum

3.11 Locate and repair surface irregularities and straighten contours on a damaged panel using Glue-Pulling Dent Repair (GPDR)

3.12 Mix and apply body filler

## STANDARD 4.0 DETERMINE MOVEABLE GLASS AND HARDWARE REQUIREMENTS

4.1 Inspect, adjust, overhaul, repair, or replace window regulators, run channels, glass, power mechanisms, and related controls

4.2 Inspect, adjust, repair, remove, reinstall, or replace weather-stripping

4.3 Inspect, remove, repair or replace, and adjust removable power-operated roof panel and hinges, latches, guides, handles, retainer, and controls of sunroofs

## STANDARD 5.0 PERFORM PLASTICS, ADHESIVES, AND WELDING REPARABILITY

5.1 Identify the types of plastics and determine reparability

5.2 Identify location of damage relative to safety systems (ADAS); determine repairability according to manufacturer repair procedures

5.3 Clean and prepare the surface of plastic parts and identify the types of plastic repair procedures

5.4 Repair rigid, semi-rigid, and flexible plastic panels

5.5 Remove, replace, or repair damaged areas of rigid exterior composite panels

5.6 Repair plastic parts by welding (e.g., nitrogen and airless)

5.7 Perform a single-sided adhesively bonded cosmetic repair

5.8 Perform a double-sided adhesively bonded repair

5.9 Perform an adhesively bonded or welded tab repair

5.10 Shape and reform damaged plastic

## STANDARD 6.0 APPLY SAFETY PRECAUTIONS WHEN PAINTING AND REFINISHING

6.1 Select and use the proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (i.e., gloves, suits, hoods, eye and ear protection, etc.) and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations

6.2 Identify safety and personal health hazards according to OSHA guidelines, the "Right to Know Law", and Safety Data Sheet (SDS) information

6.3 Inspect spray environment and equipment to ensure compliance with federal, state, and local regulations, and for safety and cleanliness hazards

6.4 Select and use a NIOSH approved respiratory protection system (supplied air/fresh air make up recommended) and perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulations

6.5 Perform vehicle clean-up and complete quality control using a checklist on operations performed (e.g., use soap, water, and sponge to wash vehicle, wheel wells, wheels, door jams, hood, and truck jams; dry vehicle using an absorbent towel; clean all glass and chrome; in booth, pick up any loose paper and tape; sweep, clean floor and walls, and remove water from floors and walls with broom and squeegee)

6.6 Demonstrate knowledge of the process for tracking of expelled volatile organic compounds (VOCs)

6.7 Follow federal, state, and local regulations regarding the handling and disposal of refinishing waste products

## STANDARD 7.0 PERFORM SURFACE PREPARATION FOR PAINTING AND REFINISHING

7.1 Inspect, remove, store, protect, and replace exterior trim and components necessary for proper surface preparation

7.2 Wash entire vehicle with soap and water and use appropriate cleaner to remove contaminants

7.3 Remove paint finish as needed

7.4 Properly sand areas to be refinished

7.5 Identify and select appropriate sandpaper to featheredge areas to be refinished

7.6 Apply suitable metal treatment or primer in accordance with total product systems

7.7 Mask and protect other areas that will not be refinished

7.8 Demonstrate different masking techniques (i.e., recess/back masking, foam door type, etc.)

7.9 Mix primer, primer surfacer, and primer sealer following the paint technical data sheet instructions according to the manufacturer

7.10 Apply primer onto surface of repaired area, demonstrating control of primer application by keeping the areas as small as possible

7.11 Force curing and drying of primer coating following paint manufacturers technical data sheet

7.12 Apply two-component finishing filler to minor surface imperfections

7.13 Guide coat and block sand area with correct grade/grit sandpaper to which primer surfacer has been applied

7.14 Dry sand area to which two-component finishing filler has been applied

7.15 Remove dust from area to be refinished, including cracks or moldings of adjacent areas

7.16 Clean area to be refinished using a recommended final cleaning solution

7.17 Prepare adjacent panels for blending using paint manufacturers procedures

7.18 Identify the types of rigid, semi-rigid or flexible plastic parts to be refinished; determine the materials needed, preparation, and refinishing procedures

7.19 Identify metal parts to be refinished and determine the materials needed, preparation, and refinishing procedures

7.20 Identify refinishing guidelines for stationary glass flange areas to be refinished

## STANDARD 8.0 PERFORM SPRAY GUN AND RELATED EQUIPMENT OPERATION

8.1 Inspect, clean, and determine condition of spray guns and related equipment (e.g., air hoses, regulators, air lines, air source, spray environment, and filters)

8.2 Select spray gun setup (e.g., fluid needle, nozzle, and cap) for product being applied

8.3 Test and adjust spray gun using fluid, air and pattern control valves

## STANDARD 9.0 PERFORM DAMAGE ANALYSIS

9.1 Identify components to be removed to gain access to damaged areas

9.2 Analyze damage to determine appropriate methods in accordance with manufacturers recommendations and guidelines

9.3 Determine the direction, point(s) of impact, and extent of direct, indirect, and inertia damage

9.4 Perform visual inspection of non-structural components and members

9.5 Determine parts, components, material type(s), and procedures necessary for a proper repair

9.6 Identify suspension, electrical, and mechanical component physical damage

9.7 Identify single (one time) use components

## STANDARD 10.0 PERFORM ESTIMATION

10.1 Record customer/vehicle owner information

10.2 Record vehicle identification number (VIN) information, including nation of origin, make, model, restraint system, body type, production date, engine type, build data, and assembly plant

10.3 Record vehicle mileage and options, including trim level, paint code, transmission, accessories, and modifications

10.4 Identify safety systems and determine precautions, inspections, and replacement items as required

10.5 Apply appropriate estimating and parts nomenclature (terminology)

## STANDARD 11.0 DETERMINE VEHICLE CONSTRUCTION AND PARTS IDENTIFICATION

11.1 Identify type of vehicle construction (e.g., unibody, body-over-frame, and alternates)

11.2 Recognize the different collision damage between unibody and body-over-frame vehicles

11.3 Identify impact energy absorbing components

11.4 Identify different types of substrates (i.e., steel types, aluminum, magnesium, plastic, composites, etc.) and determine reparability

11.5 Identify vehicle glass components and repair/replacement procedures

11.6 Identify add-on accessories

11.7 Recognize different vehicle joining/attaching methods (e.g., welding, adhesives, and rivets)

## STANDARD 12.0 PERFORM MECHANICAL AND ELECTRICAL COMPONENT OPERATIONS FOR SUSPENSION AND STEERING, FUEL INTAKE, AND EXHAUST SYSTEMS
### (ELECTRICAL – Note: All tasks in this section refer to low voltage system and components only.)

12.1 Reinstall wheels and tighten lug nuts to manufacturer specification using a torque wrench

12.2 Remove, replace, and recharge battery

12.3 Check operation and aim headlamp assemblies and fog/driving lamps

12.4 Remove and replace horn(s); check operation

12.5 Check operation of wiper/washer systems

12.6 Remove and replace air intake components

# DIESEL ENGINE REPAIR 43.0202.00
# TECHNICAL STANDARDS

An Industry Technical Standards Validation Committee updated the program technical standards by aligning them to the recently updated Automotive Service Excellence (ASE) Task and Standards List and the Tool and Equipment Lists. Students completing the program are then eligible to earn the ASE Certification. The Arizona Career and Technical Education Quality Commission, the validating authority for the Arizona Skills Standards Assessment System, endorsed these standards on January 24, 2024.

Note: Arizona's Professional Skills are taught as an integral part of the Diesel Engine Repair program.

**The Technical Skills Assessment for Diesel Engine Repair is available SY2024-2025.**

Note: In this document i.e. explains or clarifies the content and e.g. provides examples of the content that must be taught.

## STANDARD 1 .0 PERFORM AUTOMOTIVE SHOP AND SAFETY TASKS

1.1 Identify general shop safety rules and procedures

1.2 Utilize safe procedures for handling of tools and equipment

1.3 Identify and use proper placement of floor jacks and jack stands

1.4 Identify and use proper procedures for safe lift operation

1.5 Utilize proper ventilation procedures for working within the lab/shop area

1.6 Identify marked safety areas

1.7 Identify the location and the types of fire extinguishers and other fire safety equipment

1.8 Identify procedures for using fire extinguishers and other fire safety equipment

1.9 Identify the location and use of eye wash stations

1.10 Identify the location of the posted evacuation routes

1.11 Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities

1.12 Identify and wear appropriate clothing for lab/shop activities

1.13 Secure hair and jewelry for lab/shop activities

1.14 Explain the safety aspects of vehicle systems that can operate automatically when the vehicle is off (e.g., supplemental restraint systems (SRS), electronic brake control systems, and electrified vehicle systems)

1.15 Explain the safety aspects of high voltage circuits (i.e., high intensity discharge (HID) lamps, ignition systems, injection systems, electrified vehicle powertrain, etc.)

1.16 Locate and demonstrate knowledge of safety data sheets (SDS)

1.17 Identify tools and their usage in medium/heavy truck applications

1.18 Identify standard and metric designation

1.19 Demonstrate safe handling and use of appropriate tools

1.20 Demonstrate proper cleaning, storage, and maintenance of tools and equipment

1.21 Demonstrate proper use of precision measuring tools (i.e., micrometer, dial-indicator, dial-caliper, torque wrench, etc.)

1.22 Identify information necessary and the service requested on a repair order

## STANDARD 2.0 PERFORM PRE-TRIP INSPECTION

2.1 Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins

2.2 Inspect level and condition of fuel, oil, diesel exhaust fluid (DEF), and coolant

2.3 Inspect engine assembly for fuel, oil, coolant, air, and other leaks

2.4 Check engine operation (starting and running) including noise, vibration, smoke, etc.

2.5 Use appropriate electronic service tool(s) to check and record diagnostic codes; check and record trip/operational data; reset maintenance monitor (if applicable)

2.6 Identify system components, configurations, and types of the following: cylinder head(s), valve train, engine block, engine lubrication, engine cooling, air induction, exhaust, fuel, and engine braking

## STANDARD 3.0 PERFORM LUBRICATION SYSTEM PM

3.1 Test engine oil pressure and check operation of pressure sensor, gauge, and/or sending unit; test engine oil temperature and check operation of temperature sensor

3.2 Check engine oil level, condition, and consumption; take engine oil sample

3.3 Determine proper lubricant; perform oil and filter service

## STANDARD 4.0 PERFORM COOLING SYSTEM PM

4.1 Check engine coolant type, level, condition, and test coolant for freeze protection and additive package concentration

4.2 Verify coolant temperature; check operation of temperature and level sensors, gauge, and/or sending unit

4.3 Inspect and reinstall/replace pulleys, tensioners and drive belts; adjust drive belts and check alignment

4.4 Recover coolant, flush, and refill with recommended coolant/additive package; bleed cooling system

4.5 Inspect coolant conditioner/filter assembly for leaks; inspect valves, lines, and fittings; replace as needed

4.6 Inspect water pump, hoses, and clamps

4.7 Inspect and pressure test cooling system(s); pressure test cap, tank(s), and recovery systems; inspect radiator and mountings

4.8 Inspect thermostatic cooling fan system (hydraulic, pneumatic, and electronic) and fan shroud

4.9 Identify engine block heater(s)

## STANDARD 5.0 PERFORM AIR INDUCTION AND EXHAUST SYSTEM PM

5.1 Inspect turbocharger(s), wastegate(s), and piping systems

5.2 Check air induction system including cooler assembly, piping, hoses, clamps, and mountings; replace air filter as needed; reset restriction indicator (if applicable)

5.3 Inspect intake manifold, gaskets, and connections

5.4 Inspect engine exhaust system, exhaust gas recirculation (EGR) system, and exhaust after treatment systems [e.g., Diesel Exhaust Fluid (DEF), Selective Catalyst Reduction (SCR), Diesel Particulate Filter (DPF)] for leaks, mounting, proper routing, and damaged or missing components

5.5 Inspect and maintain crankcase ventilation components

5.6 Inspect engine compression and/or exhaust brake operation

## STANDARD 6.0 PERFORM FUEL SYSTEM PM

6.1 Check fuel level and condition

6.2 Inspect fuel tanks, vents, caps, mounts, valves, screens, crossover system, hoses, lines, and fittings

6.3 Inspect low pressure fuel system components (fuel pump, pump drives, screens, fuel/water separators/indicators, hoses, lines, filters, heaters, coolers, ECM cooling plates, check valves, pressure regulator valves, restrictive fittings, and mounting hardware)

6.4 Replace fuel filter; prime and bleed fuel system

6.5 Inspect high pressure fuel system components (fuel pump, pump drives, hoses, injection lines, filters, hold- downs, fittings, seals, and mounting hardware)

## STANDARD 7.0 PERFORM DRIVE TRAIN PM

7.1 Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins

7.2 Identify drive train components, transmission type, and configuration

7.3 Inspect and adjust clutch, clutch brake, linkage, cables, levers, brackets, bushings, pivots, springs, and clutch safety switch (includes push-type and pull-type); check pedal height and travel

7.4 Inspect clutch master cylinder fluid level and condition; check clutch master cylinder, slave cylinder, lines, and hoses for leaks and damage

7.5 Inspect transmission shifter and linkage; inspect transmission mounts, insulators, and mounting bolts

7.6 Inspect transmission for leakage

7.7 Inspect transmission cover plates, gaskets, seals, and cap bolts; inspect seal surfaces and vents

7.8 Check transmission fluid level and condition; determine needed action

7.9 Inspect transmission oil filters, coolers and related components

7.10 Inspect speedometer components

7.11 Inspect and test function of REVERSE light, neutral start, and warning device circuits

7.12 Inspect and service if applicable driveshafts, slip joints, yokes, drive flanges, support bearings, universal joints, boots, seals, and retaining/mounting hardware; check phasing of all shafts

7.13 Check for fluid leaks; inspect drive axle housing assembly, cover plates, gaskets, seals, vent/breather, and magnetic plugs

7.14 Check drive axle fluid level and condition; check drive axle filter

7.15 Inspect air-operated power divider (inter-axle differential) assembly

7.16 Inspect drive axle shafts; determine needed action

7.17 Remove and replace wheel assembly; check rear wheel seal and axle flange for leaks; determine needed action

## STANDARD 8.0 PERFORM AIR BRAKE SYSTEM PM

8.1 Research vehicle service information, including fluid type, vehicle service history, service precautions, and technical service bulletins

8.2 Identify brake system components and configurations (including air and hydraulic systems, parking brake, power assist, and vehicle dynamic brake systems)

8.3 Identify brake performance problems caused by the mechanical/foundation brake system (air and hydraulic)

8.4 Inspect air supply system components such as compressor, governor, air drier, tanks, and lines; inspect service system components such as lines, fittings, mountings, and valves (hand brake/trailer control, brake relay, quick release, tractor protection, emergency/spring brake control/modulator, pressure relief/safety)

8.5 Verify proper gauge operation and readings; verify low pressure warning alarm operation; perform air supply system tests such as pressure build-up, governor settings, and leakage; drain air tanks and check for contamination

8.6 Inspect service brake chambers, diaphragms, clamps, springs, pushrods, clevises, and mounting brackets; determine needed action

8.7 Identify slack adjuster/brake adjuster type; check free stroke and applied stroke; inspect and lubricate slack adjusters/brake adjusters; determine needed action

8.8 Inspect and lubricate camshafts (S-cams), tubes, rollers, bushings, seals, spacers, retainers, brake spiders, shields, anchor pins, and springs; determine needed action

8.9 Inspect rotor and mounting surface; measure rotor thickness, thickness variation, and lateral runout; determine needed action

8.10 Inspect, clean, and adjust air disc brake caliper assemblies; inspect and measure disc brake pads; inspect mounting hardware; determine needed action

8.11 Remove brake drum; clean and inspect brake drum and mounting surface; measure brake drum diameter; measure brake lining thickness; inspect brake lining condition; determine needed action

8.12 Inspect and check parking (spring) brake chamber for leaks; determine needed action

8.13 Inspect and test parking (spring) brake check valves, lines, hoses, and fittings; determine needed action

8.14 Inspect and test parking (spring) brake application and release valve; determine needed action

8.15 Manually release (cage) and reset (uncage) parking (spring) brakes

8.16 Observe antilock brake system (ABS) warning light operation including trailer and dash mounted trailer ABS warning light

8.17 Observe automatic traction control (ATC) and electronic stability control (ESC) warning light operation

## STANDARD 9.0 PERFORM HYDRAULIC BRAKE SYSTEM PM

9.1 Check master cylinder fluid level and condition; determine proper fluid type for application

9.2 Inspect hydraulic brake system components for leaks and damage

9.3 Check hydraulic brake system operation including pedal travel, pedal effort, and pedal feel

9.4 Inspect rotor and mounting surface; measure rotor thickness, thickness variation, and lateral runout; determine needed action

9.5 Inspect and clean disc brake caliper assemblies; inspect and measure disc brake pads; inspect mounting hardware and slides; determine needed action

9.6 Remove brake drum; clean and inspect brake drum and mounting surface; measure brake drum diameter; measure brake lining thickness; inspect brake lining condition; inspect wheel cylinders; determine needed action

9.7 Check parking brake operation; inspect parking brake application and holding devices

9.8 Check brake assist/booster system (vacuum or hydraulic) hoses, pump, switches, and control valves; check fluid level and condition (if applicable)

9.9 Check operation of emergency (back-up/reserve) brake assist system

9.10 Observe antilock brake system (ABS) warning light operation including trailer and dash mounted trailer ABS warning light

9.11 Observe automatic traction control (ATC) and electronic stability control (ESC) warning light operation

## STANDARD 10.0 PERFORM SUSPENSION AND STEERING SYSTEMS PM

10.1 Research vehicle service information, including fluid type, vehicle service history, service precautions, technical service bulletins, special service message(s)

10.2 Disable and enable supplemental restraint system (SRS); verify indicator lamp operation

10.3 Identify suspension and steering system components and configurations

10.4 Check steering wheel for free play, binding, and proper centering; inspect and service steering shaft U-joint(s), slip joint(s), bearings, bushings, and seals; phase steering shaft

10.5 Check operation of tilt and telescoping steering column

10.6 Check cab mounts, suspension, and ride height

10.7 Check power steering pump and gear operation, mountings, lines, and hoses; check fluid level and condition; service filter; inspect system for leaks

10.8 Flush and refill power steering system; purge air from system

10.9 Inspect and lubricate tie rod ends, ball joints, kingpins, pitman arms, idler arms, and other steering linkage components

10.10 Inspect shock absorbers, bushings, brackets, and mounts; determine needed action

10.11 Inspect leaf springs, center bolts, clips, pins, bushings, shackles, U-bolts, insulators, brackets, and mounts; determine needed action

10.12 Inspect axle and axle aligning devices such as: radius rods, track bars, stabilizer bars, and torque arms; inspect related bushings, mounts, and shims

10.13 Inspect tandem suspension equalizer components

10.14 Inspect and test air suspension pressure regulator and height control valves, lines, hoses, dump valves, and fittings; measure and record ride height

10.15 Inspect air springs, mounting plates, springs, suspension arms, and bushings

## STANDARD 11.0 PERFORM TIRE AND WHEEL PM

11.1 Explain alignment angles and their influence on tire wear and vehicle tracking

11.2 Inspect tire condition; identify tire wear patterns; measure tread depth; verify tire matching (diameter and tread); inspect valve stem and cap; set tire pressure; verify tire pressure monitoring system (TPMS) operation (if applicable)

11.3 Explain causes for wheel/tire vibration, shimmy, pounding, and hop (tramp) problems

11.4 Check wheel mounting hardware; check wheel condition and runout; remove and install wheel/tire assemblies (steering and drive axle); torque fasteners to manufacturer's specification using torque wrench

## STANDARD 12.0 PERFORM FRAME AND FIFTH WHEEL PM

12.1 Inspect, service, and/or adjust fifth wheel, pivot pins, bushings, locking mechanisms, mounting hardware, air lines, and fittings

12.2 Inspect frame and frame members for cracks, breaks, corrosion, distortion, elongated holes, looseness, and damage

12.3 Inspect frame hangers, brackets, and cross members

12.4 Check pintle hook and mounting (if applicable)

## STANDARD 13.0 PERFORM GENERAL ELECTRICAL/ELECTRONIC SYSTEM DIAGNOSIS AND REPAIR

13.1 Research vehicle service information, including vehicle service history, service precautions, and technical service bulletins

13.2 Demonstrate knowledge of electrical/electronic series, parallel, and series-parallel circuits using principles of electricity (Ohm's Law)

13.3 Demonstrate operation and proper use of digital multimeters and other test equipment when measuring source voltage, voltage drop (including grounds), current flow, continuity, and resistance

13.4 Demonstrate the causes and effects of shorts, grounds, opens, and resistance problems in electrical/electronic circuits

13.5 Use wiring diagrams to trace electrical/electronic circuits

13.6 Measure parasitic (key-off) battery drain

13.7 Demonstrate the function, operation, and testing of fusible links, circuit breakers, relays, solenoids, actuators, diodes, and fuses

13.8 Inspect, repair (including solder repair, mechanical crimp repair, and sealed heat shrink), and/or replace connectors, seals, terminal ends, and wiring; verify proper routing and securement

13.9 Use appropriate electronic service tool(s) and procedures to diagnose problems; check and record diagnostic codes; interpret digital multimeter (DMM) readings

13.10 Check for malfunctions caused by faults in the data bus communications network

13.11 Identify electrical/electronic system components and configuration

## STANDARD 14.0 PERFORM BATTERY DIAGNOSIS AND REPAIR

14.1 Identify battery type and system configuration

14.2 Confirm proper battery capacity for application; perform battery state-of-charge test; perform battery capacity test, determine needed action

14.3 Inspect and clean battery, battery cables, connectors, battery boxes, mounts, and hold-downs; determine needed action

14.4 Charge battery using appropriate method for battery type

14.5 Jump-start vehicle using a booster battery and jumper cables or using an appropriate auxiliary power supply

14.6 Identify low voltage disconnect (LVD) systems

## STANDARD 15.0 PERFORM STARTING SYSTEM DIAGNOSIS AND REPAIR

15.1 Explain starter system operation

15.2 Perform starter circuit cranking voltage and voltage drop tests

15.3 Inspect starter control circuit switches, relays, connectors, terminals, wires, and harnesses (including over-crank protection)

## STANDARD 16.0 PERFORM CHARGING SYSTEM DIAGNOSIS AND REPAIR

16.1 Explain the operation of the alternator

16.2 Check instrument panel mounted gauges and/or indicator lamps

16.3 Inspect alternator drive belt condition; check pulleys and tensioners for wear; check fans and mounting brackets; verify proper belt alignment

16.4 Inspect cables, wires, and connectors in the charging circuit, including remote sense circuit

16.5 Perform charging system voltage and amperage output tests; perform AC ripple test

## STANDARD 17.0 PERFORM LIGHTING SYSTEM DIAGNOSIS AND REPAIR

17.1 Inspect for brighter-than-normal, intermittent, dim, or no-light operation; determine needed action

17.2 Test, replace, and aim headlights

17.3 Inspect cables, wires, and connectors in the lighting systems

17.4 Inspect tractor-to-trailer multi-wire connectors, cables, and holders

# FASHION DESIGN AND OPERATIONS 50.0407.00 TECHNICAL STANDARDS

An Industry Technical Standards Validation Committee developed and validated these standards throughout December 2023 and January 2024. The Arizona Career and Technical Education Quality Commission, the validating authority for the Arizona Skills Standards Assessment System, endorsed these standards on January 24, 2024.

Note: Arizona's Professional Skills are taught as an integral part of the Fashion Design and Operations program.

**The Technical Skills Assessment for Fashion Design and Operations is available SY2025-2026.**

Note: In this document i.e. explains or clarifies the content and e.g. provides examples of the content that must be taught.

## STANDARD 1 .0 APPLY MATHEMATICAL CALCULATIONS TO PROJECTS IN DESIGN AND MERCHANDISING

1.1 Use mathematical processes in design and merchandising employing data to establish trends in the industry (e.g., include numeric, symbolic, and/or graphic representations)

1.2 Perform mathematical calculations in the context applying the rule of thumb principle in wholesale pricing (i.e., 30-50% profit margins, wholesale prices vs. retail prices, etc.)

1.3 Perform conversions of U.S. and Metric units of measurement

1.4 Calculate the cost of projects including total person hours per task and cost of materials

1.5 Calculate percentages in merchandising and manufacturing sales using mathematical formulas (e.g., markup/markdown, gross margin, keystoning, and profit and loss)

1.6 Define mass production and its advantages (i.e., division of labor, cost effectiveness, large scale demand, higher profit, etc.) and disadvantages (i.e., capital intensive, errors produced in mass quantities that require costly redesign, repetitive work, etc.)

1.7 Explain the transition from prototype to mass production (i.e., trend/demand research, sketch/design software, raising capital, etc.)

1.8 Use a fabric weight classification chart to determine the correct fabric for a project (e.g., lightweight, medium weight, and heavyweight)

## STANDARD 2.0 EXAMINE MEASUREMENT TECHNIQUES IN PATTERN DESIGN, GARMENT MANUFACTURING, AND MERCHANDISING

2.1 Explain factors contributing to accurate body measurement for a well-fitted and enhanced look in clothing, minimizing fabric waste, and providing value to the wearer

2.2 Demonstrate Points of Measure (POM) from starting to ending location, including tolerance, in gathering measurement data (i.e., body length at front, body length at back, chest width, waist width, etc.), and utilize Tech Packs to record collected data

2.3 Recognize advanced technology integration for improved measurement accuracy [e.g., Computer-Aided Design (CAD) and 3D body scanning]

2.4 Use anthropometric data (e.g., measuring and analyzing the dimensions and proportions of the human body) to create patterns and garments that accommodate a wide range of body shapes and sizes

2.5 Compare and contrast body measurement (e.g., the unique dimensions of an individual's body) and garment measurement (e.g., measurements resulting from the patterns and designs based on body measurements) to ensure garment comfort and fit

2.6 Explain the functions and types of traditional measurement and pattern drafting tools used in design, manufacturing, and merchandising (i.e., tape measure, rulers and yardsticks, flexible curve ruler, hem/seam gauge, French curve, hip curve, fabric scissors, etc.)

2.7 Select the appropriate measurement tool for a specific task in pattern drafting (i.e., French curve for necklines, armholes, and other curves in a garment, etc.)

2.8 Select the appropriate measurement technique and tools for a specific project requirement (e.g., pleating, seaming, and gathering)

2.9 Select the appropriate measurement technique and tools for a specific need considering fabric type, thickness, and intended use (e.g., apparel, industrial, and/or medical)

2.10 Discuss the advantages and disadvantages of digital cutting tables vs. traditional sewing tools

## STANDARD 3.0 ANALYZE THE PRINCIPLES AND ELEMENTS OF DESIGN

3.1 Explain how basic design elements (e.g., line, shape, form, space, texture, and color) form structure and convey visual messages

3.2 Explain how basic design principles (e.g., contrast, balance, emphasis, proportion, hierarchy, repetition, rhythm, pattern, positive and negative space, movement, variety, and unity) are combined with design elements to create visual illusions or flattering aesthetics

3.3 Identify terminology related to color theory as an element of science and art (e.g., color wheel; primary-, secondary-, and tertiary colors)

3.4 Differentiate among the three categories of color (e.g., hue, tone/value, and saturation)

3.5 Recognize color scheme on the color wheel and how colors create harmony resulting in visually appealing looks for garments, accessories, and fashion collections (e.g., complementary, analogous, warm and cool, and pastels)

3.6 Explain how the psychology of color can create contrast, establish harmony, and draw out emotions in garments (i.e., red is strong and powerful; blue portrays calm and sadness; purple is an indication of wealth, etc.)

3.7 Explain how color, pattern, and material create mood in design

3.8 Use the Pantone Color Matching System to identify colors, match colors, and provide color data when needed (e.g., included in a tech pack, line sheet, etc.)

## STANDARD 4.0 EVALUATE TEXTILES, FIBERS, AND FABRICS FOR THE OVERALL LOOK AND FUNCTIONALITY OF A GARMENT

4.1 Distinguish among textiles, fibers, and fabrics

4.2 Identify the characteristics of natural and synthetic (manufactured) fibers

4.3 Identify the names and characteristics of fabrics with various construction weaves [e.g., plain weave (most cottons, linen, rayon, chiffon, muslin, etc.); twill weave (denim, gabardine, velvet, etc.); and satin weave (crepe, charmeuse, damask)

4.4 Differentiate among woven, knit, and other methods of fabric construction (e.g., how fabric looks, handles, and behaves)

4.5 Identify fabric finishes that improve the appearance, performance, or feel of the finished textile (i.e., washing and drying, heat setting, calendaring, dyeing, coating, etc.)

4.6 Identify healthy, wellness, and cosmetic textiles that promote the well-being of the wearer for comfort, health, or appearance (i.e., antimicrobial, moisture wicking, UV protective fabrics, compression garments, cosmetic infused fabrics, etc.)

4.7 Examine various fabric treatments applied to textiles to enhance their properties or provide specific functionalities (i.e., fireproofing, embossed treatment, shrink resistance treatment, wrinkle resistance treatment, starch treatment, etc.)

4.8 Consider modifications to color prior to color application [e.g., fiber's chemical structure, environment (i.e., sunlight, fumes, ozone, etc.), and laundering (i.e., colorfastness, bleeding, crocking, deodorants; etc.)]

4.9 Compare and contrast color application methods (i.e., solution dyeing, yarn dyeing, piece dyeing, fabric dyeing, garment dyeing, product dyeing, etc.)

4.10 Select fibers and fabrics for specific end uses (i.e., polyurethane fibers for lingerie and swimsuits, olefin fibers for sportswear and activewear, etc.)

4.11 Apply care and content labeling for fabrics to increase garment wear

## STANDARD 5.0 ANALYZE THE CHARACTERISTICS, MOTIVATIONS, AND BEHAVIORS OF CONSUMERS IN A TARGET MARKET

5.1 Distinguish quality customer service (i.e., responsive communication, empathy and understanding, problem resolution; being proactive, personal, and available, etc.) from poor customer service (i.e., ignorance, inadequate training, unresponsiveness, temporary fixes, high turnover, etc.)

5.2 Analyze the relationship between customer service and customer satisfaction in determining the overall success of a business (e.g., sustained success and growth and long-term benefits)

5.3 Explain the concept of a target customer as a marketing and business strategy for attracting and retaining customers (i.e., demographics, behavioral factors, market segmentation, product development, etc.)

5.4 Discuss how a target customer is a central factor in product selection and development based on the needs and preferences of the customer (i.e., product design and features, pricing, marketing, distribution, etc.)

5.5 Distinguish the relationship among pricing, profit, and the customer's perception of value as a strategic approach (i.e., balance between setting prices and profit, creating a positive customer perception of value, etc.)

5.6 Compare and contrast common selling techniques to influence customers and increase sales (e.g., suggestion selling, loss leader, upselling, cross-selling, and limited-time offers)

## STANDARD 6.0 EXAMINE THE SALE OF GOODS AND SERVICES TO END CONSUMERS THROUGH BRICK-AND-MORTAR AND E-COMMERCE PLATFORMS

6.1 Describe the tangible customer experience of touching, feeling, and trying on products through a brick-and-mortar platform

6.2 Explain the advantages of personal interaction from in-store staff that enhances the overall shopping experience (i.e., personalized assistance, advice, styling tips, etc.)

6.3 Discuss the importance of Point of Sale (POS) efficiency in managing sales transactions and inventory effectively

6.4 Explain the disadvantages of limited space in a physical store

6.5 Discuss the importance of store location to attract foot traffic and space to manage the logistics of receiving, marking, stocking, and restocking inventory

6.6 Explain the 24/7 accessibility of an e-commerce platform (e.g., convenience of shopping anytime and anywhere)

6.7 Discuss the advantages of showcasing a wide variety of products, styles, sizes, and unlimited shelf space with online shopping

6.8 Discuss augmented reality (AR) and virtual reality (VR) to allow customers to virtually try on clothing before purchasing

6.9 Discuss the challenges of e-commerce shopping (e.g., returning items and lack of physical interaction) and its impact on customer satisfaction

6.10 Compare and contrast brick-and-mortar and e-commerce platforms in the fashion industry [i.e., operational costs (e.g., rent, utilities, and staff salaries); customer service; inventory and variety; social media, etc.]

6.11 Examine the integration of brick-and-mortar and e-commerce platforms (e.g., order online and pick up and/or return items in-store, and marketing and branding through the same social media platforms)

## STANDARD 7.0 EXAMINE MARKETING SKILLS FOR THE SUCCESS OF A DESIGN AND MERCHANDISING BUSINESS

7.1 Describe the effect of visual merchandising to influence customer perception and behavior in the retail environment

7.2 Evaluate the concept of visual merchandising using the principles and elements of design to attract customers and encourage sales (i.e., color to stimulate emotion, line for drawing customer attention to specific products, emphasis for promotional item placement, etc.)

7.3 Describe effective uses of social media for fashion marketing to build brand awareness and drive sales [i.e., fashion shows and contests; interactive platforms (i.e., Instagram, Twitter, etc.); fashion tutorials and tips (i.e., YouTube, TikTok, Instagram Reels, etc.)]

7.4 Compare and contrast social media for fashion design (i.e., Pinterest, Behance, Dribbble, Reddit, etc.) and how current trends and audience demographics can rapidly change platform popularity

7.5 Describe the proactive process of fashion forecasting and how it shapes the fashion outlook (e.g., anticipating trends and guiding the decisions of designers and industry professionals)

7.6 Discuss the importance of brand identity with the 5 P's (e.g., Purpose, Positioning, Personality, Perception, and Promotion)

7.7 Explain types and uses of promotional activities to market products and services (i.e., advertising for brand awareness, sales promotions to boost sales and attract new customers, direct marketing for targeted communication, etc.)

7.8 Describe ethical behavior in marketing to include moral principles and standards in all aspects of the marketing process

## STANDARD 8.0 DISTINGUISH AMONG DIVERSE INFLUENCES ON THE FASHION DESIGN INDUSTRY

8.1 Discuss inventions and innovations that had a global impact in fashion, shaping the way people around the world approached clothing and personal style (e.g., cotton gin, sewing machine, the zipper, and paper patterns)

8.2 Describe key moments in the 20th century defined by various social, cultural, and political events that influenced the development of American fashion (i.e., World War I, The Roaring Twenties, The Great Depression, Hippie Movement, etc.)

8.3 Explain changes during the 20th century that greatly influenced the development of American fashion [i.e., technological (i.e., mass production techniques, development of synthetic fabrics, etc.); advancements in textile printing techniques (i.e., direct-to-garment, direct-to-fabric, flatbed, etc.); social (i.e., women's liberation, youth culture, globalization, etc.); and cultural (i.e., Golden Age of Hollywood, music and subcultures, casualization of fashion, etc.)]

8.4 Identify psychological influences on the development of fashion trends (i.e., social identity and conformity; self-expression and individuality; media and celebrity influence; etc.)

8.5 Explain how values are communicated through clothing and accessories as a form of nonverbal communication (i.e., personal, cultural, and ethnic identity, socioeconomic status, gender identity, etc.)

8.6 Describe the role of leading designers, celebrities, and other influencers in determining fashion trends (i.e., trends on the runway, celebrity endorsement and red-carpet influence, social media, cultural and social movements, etc.)

8.7 Discuss the growing awareness of environmental issues focusing on sustainable and eco-friendly fashion as a business approach (e.g., sustainable materials and ethical production practices)

## STANDARD 9.0 ANALYZE A FASHION DESIGN AND MERCHANDISING BUSINESS

9.1 Describe employment opportunities in the apparel industry from design and production to retail and marketing

9.2 Analyze emerging employment opportunities with an emphasis on sustainability and technology (e.g., eco-friendly fashion and digital solutions)

9.3 Compare and contrast the advantages and disadvantages of sole proprietorships, partnerships, and corporations

9.4 Identify the stages of apparel production that contribute to the creation of a finished garment (i.e., design sketches and fabrics, pattern templates, prototypes, sewing and assembly, quality control, etc.)

9.5 Differentiate fashion design lines (e.g., the creative and thematic characteristic of a brand) and price points (e.g., the financial piece) as distinct aspects that play roles in determining the positioning and appeal of a brand

9.6 Categorize clothing based on craftsmanship, exclusivity, and the target market

9.7 Discuss how design decisions can affect the cost of apparel (e.g., haute couture, designer, bridge, contemporary, moderate, and budget/mass market)

9.8 Explain the importance of sourcing as it relates to the design process (e.g., access to materials, components, and resources) necessary to bring creative visions to life (i.e., material selection, cost efficiency, availability of ethical and sustainable sources, etc.)

9.9 Describe the steps in the manufacturing process influenced by sustainability (i.e., labeling and packaging, distribution and retail, etc.)

9.10 Identify components of trade relations that contribute to the production, distribution, and consumption of fashion products [i.e., global trade agreements and governmental policies; taxes, tariffs, and duties; Intellectual Property Protection (IPP)]

9.11 Identify channels for product distribution depending on the type of fashion products (e.g., high-end luxury, fast fashion, accessories) and the target market (i.e., brick-and-mortar, online, wholesale, wholesale, second-hand, etc.)

## STANDARD 10.0 ANALYZE FACTORS THAT DETERMINE THE SELECTION OF CLOTHING

10.1 Describe how people use clothing to reflect personal taste and comfort, cultural norms and traditions, societal influence and fashion trends, and functionality (i.e., sports, work, social events, etc.)

10.2 Describe how people choose clothing for practicality (i.e., formal vs. casual; warm vs. cold climate; budget/financial considerations, etc.)

10.3 Identify body types and characteristics that influence the proper selection of clothing for comfort and confidence (e.g., anthropometrics and physical attributes)

10.4 Recognize commonly used print and repeat types to create visually appealing patterns on fabrics (i.e., tossed, stripe, dot, directional, plaid, tartan, check, half-drop/brick, straight repeat, houndstooth, abstract, engineered print, graphic/location print, etc.)

10.5 Describe how the proper selection of fabric design can be used to manipulate perception or diminish the perceived size of a person (i.e., large vs. small prints; vertical stripes and patterns; horizontal lines, etc.)

10.6 Describe how an illusion of size can be created by the proper selection of fabric texture (i.e., matte vs. shiny fabric; fabric weight and drape; color and contrast, etc.)

## STANDARD 11.0 CONSTRUCT A GARMENT BY PRECISELY APPLYING THE PRINCIPLES OF QUALITY APPAREL CONSTRUCTION

11.1 Design and plan the creation of a garment (e.g., fabric choice, garment function, and target audience)

11.2 Determine yardage, cost of fabric, and other needs (i.e., durability, comfort, care instructions, etc.) appropriate for the garment's purpose

11.3 Compare the quality of different clothing construction techniques and their financial result (e.g., serged seam vs. wide margin seam)

11.4 Define terms commonly used in pattern directions and layout (e.g., straight grain, cross grain, bias, selvage, center front, nap, and print matching)

11.5 Interpret and follow pattern directions for constructing apparel including marker-making language [e.g., symbols and notations used (i.e., notches, cutting lines, fold lines, seam allowance, etc.)] to communicate pattern layout and cutting instructions on a marker

11.6 Perform pattern layout and cutting for garment construction to minimize waste/cost

11.7 Explain the use of appropriate equipment to practice quality stitching (e.g., sewing machine with various presser feet and stitching options and serger/overlock machine) and effective pressing techniques (e.g., iron and ironing board for steaming, starching, and pressing throughout project)

11.8 Evaluate the construction and proper fit of garments (i.e., proportion and silhouette, ease and comfort, consistency across sizes, etc.)

11.9 Focus on attention to detail and finishing techniques to contribute to overall quality of a project (e.g., pockets, trims, buttons, lining, and hand-sewn hems)

## STANDARD 12.0 PREPARE FASHION DESIGNS

12.1 Identify fabric and texture, styles (i.e., neckline, sleeves, silhouette, hemline, etc.); parts (i.e., bodice, skirt/pants, waistband, cuffs, etc.), and details (i.e., seams, darts, pleats, buttons/fastenings, pockets, embellishments, etc.) that make up a garment

12.2 Describe the proportions of a fashion figure/croquis (head-to-body ratio, torso, body divisions, shoulder width, arm and leg length, etc.)

12.3 Use the proportions of a fashion figure to sketch a design

12.4 Recognize inclusivity and accessibility in adaptive clothing design for people with physical attributes and disabilities (e.g., magnetic closures, Velcro fastenings, larger buttons, accommodations for unique body shapes and proportions, etc.)

12.5 Describe how the principles and elements of design are used to create visually appealing fashion sketches that effectively communicate a creative vision

12.6 Select appropriate fabric swatches for a fashion design for visual appeal and garment comfort, drape, and functionality

12.7 Identify design features and construction details on a technical flat to communicate project plan (i.e., neckline, shoulder and armhole, sleeve style, darts and seams, pockets, etc.)

12.8 Identify computer software and applications for Computer-Assisted Design (CAD) in the fashion industry (e.g., Auto CAD, Photoshop, and Illustrator); 3D fashion design software (i.e., CLO 3D, Browzwear, Seddi Textura); and Pattern-Making Software (i.e., Optitex, Lectra, Gerber AccuMark, Tukatech, etc.)

12.9 Select components of an apparel line (i.e., market research, concept and theme, design, fabric sourcing, production planning, branding, etc.)

## STANDARD 13.0 EXPLAIN THE IMPORTANCE OF ACCESSORIES IN FASHION TO ENHANCE AND DEFINE INDIVIDUAL STYLE

13.1 Identify accessories as a way to express personality, style, and creativity

13.2 Categorize accessories that add a finishing touch to an outfit (i.e., bags, shoes, jewelry, belts, scarves, eyewear, hair accessories, etc.)

13.3 Identify accessory styles within various categories (i.e., shoes: pumps, sneakers, boots, sandals, etc.)

13.4 Recognize how accessories can provide versatility to a simple outfit, incorporate fashion trends, balance and proportion, and functionality to an overall look of an outfit

13.5 Recognize quality construction features of different accessories (e.g., jewelry: plating, fasteners; handbags: lining, edging, and hardware)

13.6 Recognize methods used to identify counterfeit/knockoff goods (i.e., check quality of logo, stitching, labeling, materials, seams; compare with authentic items; retailer reputation, etc.)

## STANDARD 14.0 ANALYZE ETHICAL ISSUES IN FASHION DESIGN AND MANUFACTURING

14.1 Describe common ethical issues to be considered in sourcing and manufacturing (e.g., workers' rights, pollutants, energy efficiency, and animal rights)

14.2 Explain the more balanced approach to decision making with the "triple bottom line" framework (e.g., financial, social, and environmental) in defining a sustainable and responsible business

14.3 Differentiate between sustainable fashion (clothing, accessories, and footwear that are produced and consumed in ways that have a lower impact on the environment, considering the entire lifecycle) and ethical fashion (fair treatment of workers, including fair labor and fair wages)

14.4 Identify fashion businesses leading the way toward more sustainable and ethical fashion (i.e., Patagonia, H&M Conscious Collection, Eileen Fisher, etc.)

14.5 Identify actions taken within the fashion industry to support ethical design, manufacturing, and distribution (e.g., upcycling/recycling materials, "fair trade" and "cruelty-free" labeling, and green/sustainable design practices)

14.6 Explain the concept of greenwashing and the need for transparency and genuine commitment to sustainable and ethical practices in the fashion industry

14.7 Explain how the regulation of "green claims" are impacting the fashion industry (i.e., EU, UK, and US movement toward anti-greenwashing directives, regulations, laws, etc.)

14.8 Discuss how companies capitalize on "fast fashion" methods and the growing concerns about the environmental and social impact on the fashion industry.

14.9 Identify advantages of sustainable fashion approaches and closed-loop systems intended to minimize the environmental and social impact of the fashion industry (i.e., repair, redesign, and upcycle; rent, lease, and swap; green and clean; preloved, secondhand, and gently used items; transparency and traceability; etc.)

**CTE TECHNICAL SKILLS ASSESSMENTS**

**The Technical Skills Assessments System is a secure, reliable online testing application owned by the State of Arizona and housed in the Department of Education.** Districts access the ADE website to register students, conduct assessments, and access summary reports. Assessments are designed for students in their final Carnegie Unit of state-identified programs. All assessments are 100 multiple-choice items that align to program technical standards and range from knowledge and comprehension to application, analysis, and evaluation in cognitive difficulty. Most of the items are operational items that have historically proven to be valid and reliable, and the remaining are field-tested items. Those who successfully pass their TSA receive an industry-endorsed congratulatory letter and certificate.

**Teachers serve as content experts in the development of the assessment items.** Committees comprised of new and veteran secondary teachers convene annually to develop, review, and edit assessment items. The  expertise of teachers and their engagement in making connections between curriculum, instruction, and assessment have contributed greatly to the advancement of student achievement. In appreciation of their time and expertise, they are awarded a professional development certificate documenting the hours they contribute to the development and improvement of the assessments.

**Over the years the Technical Skills Assessments** have gone from being practical, end-of-program assessments to high stakes tests with the TSA data used for program improvement and accountability reporting. Districts and schools use testing results to evaluate the effectiveness of instructional practices, to better align district and state goals and expectations, to help teachers improve teaching by addressing achievement gaps, and to support collaborative conversation and to share best practices. Additionally, TSA data is used for accountability purposes. Schools earn A-F points for students who complete a CTE program and pass the TSA, the State Legislature looks at TSA scores to determine funding for CTE programs, and the TSA data is a component of the Performance Measures for the federal Perkins Grant.

**Technical Skills Assessments are available for these 54 CTE programs**. Each program's test is 100 multiple-choice items based on the content of program standards. The pass core for all programs is 60% of 80 operational items. The 20 field-tested items are not included in the overall test score. **Programs with new or updated standards to be tested on for the first-time are highlighted below.**

| CIP | PROGRAM | CIP | PROGRAM |
|---|---|---|---|
| 52.0301.00 | Accounting | 52.1900.20 | Fashion Design and Merchandising |
| 01.0000.00 | AgriScience | 50.0602.00 | Film and TV Production |
| 47.0608.00 | Aircraft Mechanics | 52.0801.00 | Finance (2022 standards) |
| 36.0202.00 | Air Transportation | 43.0202.00 | Fire Service (2023 standards) |
| 15.1303.00 | Architectural Drafting | 50.0409.00 | Graphic Design |
| 14.4201.00 | Automation and Robotics | 49.0202.00 | Heavy Equipment Operations |
| 47.0603.00 | Automotive Collision Repair | 51.2602.00 | Home Health Aide |
| 47.0604.00 | Automotive Technologies | 52.0900.00 | Hospitality Management (2023 standards) |
| 41.0100.00 | Bioscience | 50.0408.00 | Interior Design (2022 standards) |
| 52.0201.00 | Business Management | 51.0802.00 | Laboratory Assisting |
| 52.0408.00 | Business Operations (2022 standards) | 43.0100.00 | Law and Public Safety |
| 48.0703.00 | Cabinetmaking | 52.1801.00 | Marketing |
| 46.0201.00 | Carpentry | 15.1306.00 | Mechanical Drafting |
| 46.0415.00 | Construction Technologies | 51.0801.00 | Medical Assisting Services |
| 12.0400.00 | Cosmetology and Related Services | 51.1502.00 | Mental and Social Health Technician |
| 12.0500.00 | Culinary Arts | 15.0307.00 | Music and Audio Production |
| 51.0600.00 | Dental Assisting | 11.1999.00 | Network Security |
| 47.0613.00 | Diesel Engine Repair | 51.3902.00 | Nursing Services |
| 10.0304.00 | Digital Animation | 51.0805.00 | Pharmacy Support Services |
| 09.0702.00 | Digital Communication | 48.0510.00 | Precision Machining |
| 50.0605.00 | Digital Photography | 11.0202.00 | Software and App Design |
| 10.0200.20 | Digital Printing | 51.0913.00 | Sports Medicine and Rehabilitation |
| 13.1210.00 | Early Childhood Education | 50.0599.00 | Stagecraft |
| 13.1200.00 | Education Professions | 15.1202.20 | Technology Devices Maintenance |
| 14.1001.00 | Electronic Technologies | 51.3501.00 | Therapeutic Massage |
| 51.0904.00 | Emergency Medical Services | 01.8301.00 | Veterinary Assisting |
| 15.0000.00 | Engineering | 48.0508.00 | Welding Technologies |

| Schedule for Spring 2024 Technical Skills Assessments | |
|---|---|
| February 26 – May 2 | Registration for Spring Assessments |
| February 26 – May 3 (testing ends at 12:00 p.m.) | Testing Period for Spring Assessments |
| May 6 – May 10 | Congratulatory Letters, Certificates, and Transcripts Delivered to Districts |

The **Eligibility Policy for Students to Take and Retake the TSA** describes four conditions when a student can take or retake the assessment. The TSA covers content from all of the program standards. Therefore, teachers should determine the best time for students to test—that time when they are most familiar with the content.

1. **In a traditional or block schedule** a student should take the test when completing two courses worth one credit each in a single CTE program or when completing three courses worth one credit each in a single CTE program. A student can only take the test one time.

2. **If a district has added courses** to a program beyond the state's designated course sequence for that program, it will be the district's decision as to when the student will take the test, that is, after the 2nd, 3rd, or 4th course. A student can only take the test one time.

3. **If a student fails the test and retakes the course or takes an additional course** in a single CTE program, the student can retake the test in the next school year prior to graduation through special arrangements with ADE/CTE. The last test score counts.

4. **If an IEP or 504 plan states that the student can take the test more than one time,** the student can retake the test in the current or next school year prior to graduation through special arrangements with ADE/CTE. The last test score counts.

Note: Special arrangements with ADE/CTE mentioned in policy statements 3 and 4 refers to the completion, submission, and final approval of the Change Request form found on the TSA dashboard.

## TECHNICAL SKILLS ASSESSMENT RESOURCES FOR DIRECTORS AND TEACHERS

**Technical Skills Assessment Webpage** at https://www.azed.gov/cte/assessments

**Technical Skills Assessment Dashboard** available with ADEConnect Account for TSAs

**Helpline:** 602-542-5452

**Email:** CTEAssessmentHelp@azed.gov

**New Documents**
- Technical Skills Assessment Overview (formerly TSA User Guide)
- Technical Skills Assessment Troubleshooting Guide with Video Links

**ADE/CTE Standards, Assessment, Career Development Team**
- Judy Balogh, Team Lead, judy.balogh@azed.gov
- Cathy Reed, Technical Standards & Assessment Program Specialist, cathy.reed@azed.gov
- Hannah Perkins, Assessment Program Specialist, hannah.perkins@azed.gov
- Susan Farretta, Career Development Program Specialist, susan.farretta@azed.gov
- Jet Wilson Dight, Professional Development Projects Specialist, jet.wilsondight@azed.gov

# Announcement and Application Process for CTE Directors
## --2024 CTE Technical Skills Assessment Teacher Institutes--

**Dear Director,** the Annual CTE Technical Skills Assessment Teacher Institutes bring teacher committees together to review, update, and develop assessment items for their program's TSA. Each committee includes teachers new to the assessment process, those who have experienced the assessment work previously, and as well, geographic diversity is an important consideration. Each Institute begins at 8:30 a.m. and concludes by 4:30 p.m. Teachers receive a stipend of $250 and 8 hours of Professional Development Credit, with lunch on their own. Meeting dates, programs, locations, and application deadlines are listed below. <u>The application links for the TSA Institutes will be emailed to directors and teachers before. Applicants and their directors will be notified by email regarding their status to participate in the Institutes.</u>

## CTE Technical Skills Assessment Teacher Institutes

| Saturday, March 9 at West-MEC Glendale-START Bldg. | Saturday, April 6 at West-MEC Glendale-START Bldg. | Application/Notification |
|---|---|---|
| Diesel Engine Repair | Construction Technologies | |
| Dental Assisting | Fashion Design & Merchandising | **Application available:** January 5, 2024 |
| Welding Technologies | Stagecraft | **Application deadline:** February 2, 2024 |
| Film and TV Production | Cosmetology and Related Services | **Notification of acceptance:** February 16, 2024 |
| Heavy Equipment Operations | Air Transportation | |
| | Architectural Drafting | |

| Saturday – May 18 at West-MEC Glendale-START Bldg. | Tuesday, June 4 at Chandler-ASU Innovation Center | Application/Notification |
|---|---|---|
| Automation and Robotics | Automotive Collision Repair | |
| Digital Printing | Music and Audio Production | **Application available:** February 23, 2024 |
| Engineering | Business Operations | **Application deadline:** March 22, 2024 |
| Digital Photography | Business Management | **Notification of acceptance:** April 19, 2024 |
| | Network Security | |
| | Early Childhood Education | |

| Tuesday, June 11 at Chandler-ASU Innovation Center | Thursday, June 13 at Chandler-ASU Innovation Center | Application/Notification |
|---|---|---|
| Software and App Design | Hospitality Management | |
| Culinary Arts | Veterinary Assisting | **Application available:** April 12, 2024 |
| Finance | Home Health Aide | **Application deadline:** May 10, 2024 |
| Technology Devices Maintenance | Sports Medicine and Rehabilitation | **Notification of acceptance:** May 17, 2024 |
| Aircraft Mechanics | Laboratory Assisting | |

## What we need from you!

**PLEASE SPREAD THE WORD when you receive the announcement about the TSA Institutes,**

  --Recruit teachers who have shared an interest in participating in the development of TSA items.

  --Encourage teachers new to the assessment process to apply so they will be better informed.

  --Remind teachers who are interested in the Institutes to submit the application by the deadline.

  --Support your teachers' mileage and per diem if selected to participate.

**IF YOU HAVE QUESTIONS, please contact Cathy Reed (cathy.reed@azed.gov) or Judy Balogh (judy.balogh@azed.gov).**

# TECHNICAL SKILLS ASSESSMENT (TSA) INSTITUTES 2024
## Application-Notification Process

We are very excited to share with you this information about the 2024 CTE / TSA Teacher Institutes. This year, we plan to meet with 32 CTE programs. This means we will be working with many of you who anticipate working with your colleagues to review, edit, and write assessment items for your programs.

PLEASE READ THE INFORMATION BELOW CAREFULLY AND LET US KNOW IF YOU HAVE ANY QUESTIONS.

At each one-day meeting, teachers will:

❖ Learn what's new with the Technical Skills Assessments
❖ Realign assessment items to new standards, if applicable
❖ Develop a Blueprint based on updated standards, if applicable
❖ Improve and develop assessment items according to Blueprint domains

| | |
|---|---|
| **LOCATION AND TIME** | All Saturday meetings will be at the West-MEC Campus START Building at 5405 N 99th Avenue in Glendale, Arizona 85305. Meetings will start at 8:30 and adjourn no later than 4:30. Lunch will be "on your own." |
| **TEACHER COMMITTEES** | Each committee will be 6-8 teachers and a facilitator. Committees will include teachers who have experience with the item development/analysis process, teachers who are new to the process, and teachers who represent various geographic areas. |
| **PROFESSIONAL DEVELOPMENT CREDIT** | Teachers will receive a $250 stipend and 8 hours of professional development credit. Teachers should check with their CTE director to request mileage reimbursement and per diem. |
| **APPLICATION PROCESS** | We are requesting that CTE directors recommend teachers to apply and attend the TSA Teacher Institutes. So as not to omit any teacher from applying, an application will be sent to all teachers with the request to contact their director for consent and to request financial support. |
| **NOTIFICATION OF ACCEPTANCE** | Teachers and their directors will be notified by the TSA staff regarding their acceptance and/or nonacceptance to participate in the TSA Teacher Institute. |

Each TSA Teacher Institute will feature several programs. If you are interested in being considered for a teacher committee for your program, obtain your director's approval and complete and submit the application below by the deadline provided.

### CTE Teachers

✓ Obtain CTE director's consent to participate in TSA meeting
✓ Complete application by requested deadline
✓ Receive notification of acceptance

### TSA Institute Saturday, March 9, 2024- West-MEC Glendale-START Bldg.

Diesel Engine Repair
Dental Assisting
Welding Technologies
Film and TV Production
Heavy Equipment Operations

### Application/Notification

**Application Available:**
January 5, 2024
**Application deadline:**
February 2, 2024
**Notification of acceptance:**
February 16, 2024

**Apply here**

Please complete the online application to be considered for the TSA Institute on Saturday, March 9, 2024.

Direct application questions to Cathy Reed, 602.364.0103 or cathy.reed@azed.gov.

# S. B. _____

Introduced by _____

## AN ACT

REPEALING SECTION 15-249.15, ARIZONA REVISED STATUTES; AMENDING SECTIONS 15-393 AND 15-398, ARIZONA REVISED STATUTES; RELATING TO CAREER TECHNICAL EDUCATION DISTRICTS.

Y. On or before September 1 of each year, the office of economic opportunity in collaboration with the department of education shall compile ~~an~~ **A DRAFT STATEWIDE** in-demand ~~regional~~ education list of the approved career technical education programs that lead to a career path in high demand with median-to-high-wage jobs in ~~that region~~ **THIS STATE**. The office of economic opportunity shall incorporate industry feedback as part of developing the **DRAFT STATEWIDE** in-demand ~~regional educational~~ **EDUCATION** list~~. The office of economic opportunity~~ **AND** shall submit the **DRAFT STATEWIDE** in-demand ~~regional~~ education list to the Arizona career and technical education quality commission for ~~review and approval~~ **CONSIDERATION. THE ARIZONA CAREER AND TECHNICAL EDUCATION QUALITY COMMISSION SHALL APPROVE A FINAL STATEWIDE IN-DEMAND EDUCATION LIST THAT INCLUDES AT LEAST THE APPROVED CAREER TECHNICAL EDUCATION PROGRAMS INCLUDED IN THE DRAFT STATEWIDE IN-DEMAND EDUCATION LIST**. Z. Notwithstanding subsection D, paragraphs 4 and 9 and subsections P, Q and R of this section, for a student in grade nine or in the school year immediately following graduation, funding shall be provided pursuant to this section only if the student is enrolled in a program that was included on the **STATEWIDE** in-demand ~~regional~~ education list ~~compiled~~ **APPROVED** pursuant to subsection Y of this section ~~for that student's region~~ for the year in which the student began the program.

REFERENCE TITLE: high school graduation; requirements.
State of Arizona
House of Representatives
Fifty-sixth Legislature
Second Regular Session
2024

# H. B. _____

Introduced by _____

**AN ACT**

**AMENDING SECTIONS 15-701.01, 15-702 AND 15-808, ARIZONA REVISED STATUTES; RELATING TO HIGH SCHOOL GRADUATION REQUIREMENTS.**

**AN ACT**

**AMENDING SECTIONS 15-701.01, 15-702 AND 15-808, ARIZONA REVISED STATUTES; RELATING TO HIGH SCHOOL GRADUATION REQUIREMENT**

15-701.01. High schools; graduation; requirements; community college or university courses; transfer from other schools; academic credit; report A. The state board of education shall: 1. Prescribe a minimum course of study that incorporates the academic standards adopted by the state board for the graduation of pupils from high school. 2. Prescribe competency requirements for the graduation of pupils from high school incorporating the academic standards in at least the areas of reading, writing, mathematics, science and social studies **AND THE MINIMUM PERFORMANCE LEVEL REQUIREMENT DETERMINED PURSUANT TO SUBSECTION B,PARAGRAPH 1 OF THIS SECTION.**

**…**

15-701.01. High schools; graduation; requirements; community college or university courses; transfer from other schools; academic credit; report A. The state board of education shall: 1. Prescribe a minimum course of study that incorporates the academic standards adopted by the state board for the graduation of pupils from high school. 2. Prescribe competency requirements for the graduation of pupils from high school incorporating the academic standards in at least the areas of reading, writing, mathematics, science and social studies **AND THE MINIMUM PERFORMANCE LEVEL REQUIREMENT DETERMINED PURSUANT TO SUBSECTION B, PARAGRAPH 1 OF THIS SECTION.**

**…**

**B. THE DEPARTMENT OF EDUCATION SHALL: 1. ESTABLISH A METHOD AND STANDARD FOR DETERMINING THE MINIMUM PERFORMANCE LEVEL ON THE STATEWIDE ASSESSMENT ADOPTED PURSUANT TO SECTION 15-741 REQUIRED FOR GRADUATION FROM HIGH SCHOOL. 2. NOTWITHSTANDING SECTION 15-741, SUBSECTION B, PRESCRIBE A SCHEDULE FOR ADMINISTERING THE STATEWIDE ASSESSMENT ADOPTED PURSUANT TO SECTION 15-741 TO PUPILS IN HIGH SCHOOL. THE SCHEDULE PRESCRIBED PURSUANT TO THIS PARAGRAPH MUST PROVIDE AT LEAST TWO OPPORTUNITIES FOR PUPILS TO TAKE THE STATEWIDE ASSESSMENT IN EACH OF GRADES ELEVEN AND TWELVE. C. NOTWITHSTANDING CHAPTER 7, ARTICLE 3 OF THIS TITLE AND SUBSECTION A OF THIS SECTION, A STUDENT IS NOT REQUIRED TO TAKE AN19 ASSESSMENT ADOPTED PURSUANT TO SECTION 15-741 OR 15-741.02 IN GRADE ELEVEN OR TWELVE TO GRADUATE FROM HIGH SCHOOL IF THE STUDENT EITHER: 1. OBTAINS A PASSING SCORE ON A TECHNICAL SKILLS ASSESSMENT TEST FOR A CAREER AND TECHNICAL EDUCATION PROGRAM THAT IS APPROVED BY THE DEPARTMENT. 2. OBTAINS AN INDUSTRY CERTIFICATION THROUGH A CAREER AND TECHNICAL EDUCATION PROGRAM THAT IS APPROVED BY THE DEPARTMENT**