



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

ARCHITECTURE AND CONSTRUCTION:

Architectural Drafting – Contestants use their drafting skills to solve an Architectural problem, including a written test, hand sketch, and drawings computer-generated. The contest evaluates the contestants' problem-solving abilities, as well as CAD skills.

Building Maintenance – Students demonstrate competencies related to the building maintenance trade, including, but not limited to, carpet care, office and restroom cleaning, floor care and liquid measurement. *(Participation in this contest is limited to students who have who are classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997)*

Cabinetmaking – Contestants build a small cabinet from materials and drawings supplied. They read the drawings and lay out and cut the parts using a table saw, laminate trimmer, hand drill, hinge boring machine and various hand tools.

Carpentry – Contestants frame walls using wood and or metal steel studs, cut and install rafters, gable end overhangs, fascia board and soffit installation, construct stairs, install sheathing and or exterior siding and trim. Judges evaluate contestants on accuracy, the ability to read and interpret blueprints, workmanship, safety, and the proper use of tools, equipment, and materials.

Electrical Construction Wiring – Contestants complete a written test of questions formulated from the latest edition of the National Electric Code (NEC), a practical conduit bending exercise and installation of a conduit system, cabling system and wiring devices. Working from drawings and specification sheets, contestants install an electrical system common in most residential and light commercial projects.

Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) – The contest includes a series of testing stations designed to assess skills identified by industry HVACR standard, which may include work with ice machines, refrigerated display cases, small package HVAC units, furnaces, and split-system air conditioning and/or heat pump units and geothermal units.

Industrial Motor Control – Students demonstrate their knowledge of electrical principles, equipment and industry codes and standards in the design and installation of motor control systems, demonstrating their skills in applying that knowledge by installing motor control equipment and associated enclosures, raceways, pilot devices and circuitry in accordance with accepted industry practice and National Electric Code requirements.

Masonry – The students construct a composite brick & block project that will evaluate their ability to meet industry standards in quality. The contest project includes components of the most often used details in residential construction.

Plumbing – Contestants "rough-in" hot and cold-water lines with copper tubing and "rough-in" sanitary drainage, waste and vent lines with cast iron and PVC plastic for a water closet, a lavatory, a washer box, and a floor drain.

Teamworks – Teams of four students build a construction project that demonstrates their ability to work to understand the project elements based on a detailed blueprint and special instructions. During the project, the team demonstrates their ability to work together by using their carpentry, electrical, plumbing and masonry skills. Judging is based on the team's presentation skills, ability to construct the project per competition specified building codes, jobsite safety and cleanliness, proper use and accountability of tools and equipment and the rate of completion of the project for the team.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

Welding – Competitors receive contest drawings and a set of welding procedure specifications. Judges evaluate contestants on various aspects of welding: measuring weld replicas, using weld measuring gauges, laying out a plate and using oxy-acetylene equipment to cut holes, SMAW, GMAW, GTAW, FCAW and OFC. Competitors complete the steel project and weld an aluminum project in various positions using a variety of filler metals.

Welding Fabrication – A team of three students use their welding and fabrication skills to build a designed project from the given material. Each team must be skilled in the following welding and cutting processes: SMAW, GTAW, GMAW, FCAW and OFC.

Welding Sculpture – Contestants demonstrate their ability to design and produce a sculpture of that design, as well as give a presentation on all aspects of their creation of the design. There is no live welding on site.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

ARTS, A/V TECHNOLOGY AND COMMUNICATIONS:

3-D Visualization and Animation – Teams of two produce high quality images and an animated short subject using 3D computerized images. Judges evaluate students on their technical knowledge, production skills and creative abilities, including visual development and storyboarding.

Advertising Design – The contest evaluates technical skills and creative aptitude as though contestants worked for an ad agency. In addition to a written test, competitors will re-create a given advertisement on the computer. Contestants also compete in a creative part of the competition, which involves the application of creative thinking and development of a design problem.

Audio/Radio Production – Students produce (plan, write, voice, record, edit, render, etc.) a 5-minute radio production such as a PSA, NPR style soundscape or news story, or similar. Teams produce a 30-Second Ad Spot and insert it into the production.

Broadcast News Production – Two students serve as the news anchor team, one student serves as the team's director/technical director, and one student serves as the floor director. Each team has two hours to write and produce their rundown before assigned contest time. Teams produce and complete a three-minute newscast as if it were live.

Digital Cinema Production – A team of two creates a short video (4 ½ to 5 minutes), filmed, and edited on site. Students also complete a written exam and a storyboard and take part in an interview with judges.

Graphic Communications – Student competitors complete seven-part contest which includes Digital Workflow, Electronic Prepress, Finishing, Offset Press Operations, Oral Professional Assessment, Production Planning, and Technical Knowledge Test.

Graphic Imaging Sublimation – Students demonstrate individual skills in producing graphic imaging sublimation products using equipment and technologies meeting graphic imaging sublimation industry standards. Students may also print items, such as mugs, mouse pads, metal, glass, ceramic tiles, hardboard, polyester knit cloth, slate, and fiber reinforced plastic.

Photography – Contestants demonstrate their ability to use digital SLR's, image editing software (Adobe Photoshop) and professional studio lighting. Students perform on-site photography, portrait studio lighting & posing, process and print digital photos and submit two mounted & matted photographs for judging and display at the competition.

Screen Printing Technology – Contestants prepare screens, register a multi-color design on a manual four color one station rotary press, and print a multi-color design on a manual six color four station rotary press.

Television (Video) Production – Teams of two contestants plan and shoot a video (30 seconds or one minute in length) on location to convey the "theme" of the prompt. Editing takes place in the contest area with special emphasis on professional production of the video by industry standards, quality of audio and video, and adequate conveyance of the "theme" to the viewer.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

ENGINEERING AND TECHNOLOGY EDUCATION:

Electronics Technology – The contest includes five sections: customer service exam, written exam, soldering, breadboarding and troubleshooting. Contestants demonstrate their knowledge of analog and digital circuitry; ability to troubleshoot electronic circuits; ability to construct and test experimental circuits; and ability to design and select circuit components.

Engineering Technology and Design – A team of three students demonstrates their ability to design an innovative engineering project and present those ideas along with a display and live model. Judges evaluate students on their performance as a professional team, presentation of their project to a panel of judges, their storyboard presentation model, and the overall effect of the presentation.

Mobile Robotics Technology – Teams of two solve a task using a mobile robotic system (VEX). The contest evaluates their ability to document, construct, program and exhibit their solution, and students participate in interviews for their overall design process and programming solution to the problem.

Principles of Engineering/Technology – Contestants demonstrate their understanding of basic technical concepts/principles of the applied sciences and ability to demonstrate and explain the concept in action and application.

Robotics and Automation Technology – A two-person team demonstrates operation of a five-axis servo-robot along with a set of sensors and motorized devices to resolve a simulated production process problem.

Robotics: Urban Search and Rescue – A two-member team builds its robot and arm mechanism prior to the competition. During the competition, the team remotely operates the robot, which must traverse the course, locate the ordinances, secure them, and properly dispose of them.

Team Engineering Challenge (Middle School only) – Teams of three work together to solve a problem and provide a clear explanation of the topic using examples, experiments, displays and practical testing operations. Teams must also “purchase” items to solve the problem in adherence to a budget.

UAV Drones Competition – Student teams develop real-world expertise in UAV multi-rotor design, construction, programming, operation, and repair. Teams demonstrate fundamental drone piloting and safety skills through participation.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

HEALTH SCIENCES:

Basic Health Care Skills – Contestants demonstrate their knowledge and ability to perform entry-level procedures or skills based on core standards, including academics, communication skills, employability, teamwork, and legal and ethical issues.

Dental Assisting – Contestants demonstrate procedures specified in the accreditation standards for Dental Assisting Education Programs of the Commission on Dental Accreditation. Judges evaluate students in chair-side assisting, preparation of dental materials, infection control, and emergency, laboratory, and office procedures.

First Aid/CPR – The contest evaluates a contestant's ability to perform procedures or take appropriate action based on scenarios presented related to CPR (Adult/AED, 2-man system, child, and infant CPR) first aid medical emergencies.

Health Knowledge Bowl – Teams of four demonstrate their collective knowledge of health occupations, judged on speed and accuracy answering questions in nine categories: Academic Foundations, Communication, Systems, Employability Skills, Legal Responsibility, Ethics, Safety Practices, Teamwork, and Health Maintenance.

Health Occupations Professional Portfolio – The competition evaluates the ability of the students to market themselves to a prospective employer by presenting a portfolio and use effective communication skills in presenting.

Medical Assisting – Contestants demonstrate their clinical and administrative skills, including speed, the use of correct safety measures and their ability to interact personally with a patient, general office and communication skills, patient education, anatomy and physiology, terminology, instrument identification and equipment, and other techniques.

Medical Math – Contestants demonstrate their knowledge of general math concepts used in the healthcare fields. They complete a written test that may include the use of ratio/proportion, dosage calculation, metric and household equivalents, Roman numerals, abbreviations, and general math including percentages, among other medical math-related problems.

Medical Terminology – Students complete a written exam to evaluate the knowledge of medical terminology and abbreviations of an individual preparing for employment in the health occupations fields.

Nurse Assisting – Students demonstrate knowledge and skill in performing personal care, encouraging patient independence, assisting with ambulation, and performing other routine tasks, including standard infection control procedures used in basic nurse assisting. Contestants also demonstrate CPR knowledge and measurement of vital signs.

Practical Nursing – Contestants demonstrate their knowledge of medical terminology, body structure and function, nutrition, medications, and nursing care. They must also demonstrate their abilities to perform job skills such as: administration of medications; physical assessment; insertion of a nasogastric tube; sterile dressing change, and CPR.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

HOSPITALITY AND TOURISM:

Commercial Baking – Contestants demonstrate their knowledge and skills through scaling, mixing, preparing, and baking six products, including breads, rolls, Danish, cookies, and pies. The student also must demonstrate their cake decorating skills.

Culinary Arts – The competition encompasses both hot and cold food preparation and presentation. Contestants will demonstrate their knowledge and skills through the production of a four-course menu. Judges evaluate contestants on their organization, knife skills, cooking techniques, creative presentation, sanitation food safety techniques, and the quality and flavor of their prepared items.

***Culinary Quiz Bowl** – A team of 3-5 students participate in a timed live quiz bowl and complete a written exam based on culinary and hospitality knowledge.

***MRE Challenge** – A team of two students use 6-8 various MREs (Meals Ready to Eat) and create a full menu, including an entrée, appetizer, beverage, and dessert. The only materials permitted are those contained within the MREs and may not use any additional ingredients or methods of preparation.

Restaurant Service – Contestants use skills required in the "front of the house" of a fine dining restaurant. Students must provide great service and guest relations in the dining room including table set up, greeting guests, description of menu and specials of the day, taking orders, serving, and clearing each course, preparation and presentation of the check and closing remarks.

***Wedding Cake Design** – A team of two students design a 3-tiered wedding cake and execute the preparation on site. Students participate in an interview regarding their creative process and technical abilities.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

HUMAN SERVICES:

Barbering – Students execute three cuts during this contest, including duplicating a given cut, a flat top, and a creative freestyle design. They also participate in an interview component and provide a presentation to the judges on their creative design.

Cosmetology – Contestants create haircuts from finished photos and highlight their creativity in the long hair segment of the competition where student demonstrate their own design skills through coloring and styling.

***Cosmetology Quiz Bowl** – A team of 3-5 students participate in a timed live quiz bowl and complete a written exam based on cosmetology knowledge.

Early Childhood Education – Contestants prepare a written lesson plan and take a written test assessing their knowledge of child development and effective teaching strategies, demonstrate their understanding of the unique age-related learning characteristics of young children and the relevant social interactions as they implement the lesson.

Esthetics – The Esthetics competition evaluates the contestants' techniques and professionalism in the field of skin care. Judges assess students in areas to include: an oral skin consultation; a written exam covering the fundamentals of skin care; sanitation; skin analysis; a basic facial demonstration; and daytime and fantasy make-up application.

***Hair Weave** – Contestants demonstrate their ability to create an original weave style comparable to industry standards using sewing &/or bonding, cutting, and styling techniques. The style must be an original, creative, weave design, and should show evidence of advanced skill level. The style must include attaching, shaping & thermal styling of artificial hair.

Nail Care – The contest consists of six separate segments; oral communication skills, acrylic application, tip and wrap application, nail polish application, nail art pedicuring and a written exam. The practical applications evaluate the contestant's ability to perform the most common nail services in the salon today.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

INFORMATION TECHNOLOGY:

Computer Programming – Competition consists of project coding and output, a skill-related written test, and an interview. Each project's specifications are written for Visual Basic, Java, C#, C++, and RPG.

Cybersecurity – A team of two students display knowledge of industry standard processes and procedures for hardening an end point or stand-alone computing device, and demonstrate abilities to securely provision operating systems, software, and configure security at initial provisioning stages, manage switch security, and demonstrate hardening of servers against attacks.

Information Technology Services – Contestants compete in modules designed to assess their knowledge as an IT service professional. The contest will challenge contestants to correct end-user computing issues, configure and secure networks, manage virtual machines, navigate and modify Windows registry, deploy operating systems, leverage troubleshooting software and tools, identify virus and malware origins, work with mobile devices, and proficiently use command line interfaces. Additionally, contestants display strong interpersonal skills (such as communication, teamwork, and honesty).

Interactive Application and Video Game Development – A team of two students produces an original prototype or sample of an interactive application or video game with at least one level and ten minutes of interactive content. Students must also produce a Game Design Document (GDD) with SWOT analysis and present their project to a panel of judges.

Internet of Things and Smart Home – Contestants install residential products including home theater system, computer networking, and video security equipment, and demonstrate knowledge of different smart home technologies.

Internetworking – The contest consists of three main parts: networking design, general networking knowledge and hands-on evaluations. The contestants find errors in WAN and LAN networks; do an ISP configuration using routers and switches; talk a technician through an error they are having on their network; and take an online exam.

Technical Computer Applications – Contestants demonstrate installation, configuration and use of Windows, Mac OSX and Linux Professional Operating Systems and one or more integrated office suite packages including email, word processing, spreadsheet applications, database applications, web page development, money management applications, presentations applications, internet browser applications, and related applications.

Telecommunications Cabling – This competition tests to worldwide industry standards for data and voice connections, physical and logical networks, and signal transmission. Contestants demonstrate skills in reading network design documentation, parts list set-up and purchase, pulling and mounting cable, choosing wiring closets, patch panel installation and termination, installing jacks and cable testing.

Web Design and Development – A team of two students completes a series of challenges focusing on website usability and accessibility, with at least one challenge related to scripting (client, server, or both). Judges evaluate teams on the process they use to meet the challenges and how well they work as a team.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

LAW, PUBLIC SAFETY AND SECURITY:

Crime Scene Investigation – A team of three students process a simulated crime scene. They legally search for, properly collect, and remove evidence of the crime. One member of the team lifts a latent fingerprint from a pre-selected item of evidence. After processing the scene, the contestants prepare their report, draw the crime scene sketch, and mark their evidence.

Criminal Justice – This contest utilizes both written examination and practical exercises to evaluate the contestants' abilities and knowledge of the field. The contestants demonstrate their knowledge and application of U.S. Constitutional Law, written and verbal communications skills, and their ability to manage an entry-level law enforcement position.

Emergency Medical Technician (EMT) – A team of two student competitors react to scenarios related to emergency medicine, including CPR, immobilization, and oxygen administration. The contest evaluates the contestant's ability to perform as an Emergency Medical Technician with the National Registry Patient Assessment Technical Scope of Practice (TSOPS).

Firefighting – The Firefighting contest evaluates safety; breathing apparatus; fire streams; ladders, ropes, knots, and hoses; fire control; ventilation; emergency medical care and rescue; and protecting fire cause evidence. Judges evaluate students using standards established by the National Fire Protection Association (NFPA).



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

LEADERSHIP AND OCCUPATIONAL:

Action Skills – A student prepares and presents a 5-7-minute demonstration of an occupational skill in an area related to the student’s CTE coursework. Contestants use examples, experiments, displays or practical operations to clearly explain their skills using contestant-prepared visual aids. *(Participation in this contest is limited to students who have who are classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997)*

American Spirit – A team of three student prepare a notebook documenting SkillsUSA chapters' community service, patriotism and citizenship, and promotion of career and technical education projects that demonstrate a belief in the American way of life and the purposes of SkillsUSA.

Career Pathways Showcase – A team of three students use their course of study as the basis of a project that will benefit their class, school, community, or industry. The project must highlight an aspect of their career cluster training. Upon completion of the project, the students develop a display and use it within their community to explain their training and their project.

Chapter Business Procedure – During a simulated regular SkillsUSA business meeting, a team of six students demonstrates the procedures necessary to complete the meeting, from call to order to adjournment, using Robert’s Rules of Order and parliamentary procedure.

Chapter Display – The contest selects the outstanding promotional exhibit designed and constructed by a team of three students and articulates a common theme established annually by SkillsUSA.

Community Action Project – A team of two contestants develop, execute, document, and present a project that was completed in their community or school which provides a benefit to the community or the school, and to evaluate local activities that benefit the community and to recognize excellence and professionalism in community service. *(Participation in this contest is limited to students who have who are classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997)*

Community Service – SkillsUSA chapters present their best community service project for the year. Contestants prepare a notebook which reports their chapter's community service project and on a live presentation to a panel of judges.

Customer Service – The contest involves live, role-playing situations. Contestants demonstrate their ability to provide quality customer service, including telephone and computer skills, communications, problem solving, conflict resolution and business etiquette.

Employment Application Process –Contestants participate in employment interviews to demonstrate readiness in applying for employment and their understanding of the process. Contestants submit a resume and portfolio, which is used by interviewers during their interviews. *(Participation in this contest is limited to students who have who are classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997)*

Entrepreneurship – A team of five students demonstrate knowledge in starting their own businesses by developing business plans that identify needed products or services in a local market. Judges evaluate with an emphasis on financial planning and practicality of product/service. Teams give oral presentations based upon their written plans and the team must successfully answer questions by a team of judges in response to typical problem encountered by entrepreneurs during their first year of business.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

Extemporaneous Speaking – Contestants deliver a three- to five-minute speech on an assigned topic with five minutes of advance preparation. Judges evaluate students on voice, mechanics, platform deportment, organization, and effectiveness.

Job Interview – This contest consists of three phases: completion of employment applications; preliminary interviews with receptionist; and in-depth interviews. Contestants demonstrate their understanding of employment procedures faced in applying for positions in the occupational areas for which they are training.

Job Skill Demonstration A – Contestants demonstrate and explain an entry-level skill used in the occupational area for which they are training. Competitors in Job Skill A must demonstrate a career objective in an occupational area included in one of the contest areas of the SkillsUSA Championships.

Job Skill Demonstration Open – Contestants demonstrate and explain an entry-level skill used in the occupational area for which they are training or outside of their training program. Students may demonstrate any technical skill.

Occupational Health and Safety – Contestants demonstrate the safety and health endeavors of their respective technical programs by putting together a scrapbook that highlights important programs, activities and events related to their school's health and safety program. Judges evaluate the planning and organization of four projects and the outcome of those projects.

Opening and Closing Ceremonies – Each team includes seven registered members in the roles of president, vice president, parliamentarian, reporter, treasurer, secretary, and historian who complete a teamwork and oral presentation contest demonstrating their understanding of the symbolic representation of the colors and assembled parts of the SkillsUSA emblem. The contest is a demonstration of the SkillsUSA Opening and Closing Ceremonies conducted according to the script and description as printed in the SkillsUSA Championships Technical Standards.

Outstanding Chapter – The Outstanding Chapter consists of activities members have been involved with during the school year, including chapter meetings, leadership training, publicity, community service projects, professional development, program of work, awards, local and state competition, and other selected chapter activities documented and submitted in a scrapbook.

Pin Design – Students present their final design along with their artwork and participate in an oral presentation regarding all aspects of their creation of the design. Contestants will explain how the pin represents the state, its unique qualities and why another SkillsUSA student or adult member would want to wear it.

Prepared Speech – Requires students to deliver a speech five to seven minutes in length on a common theme established by National SkillsUSA. Contestants demonstrate their ability to present thoughts relating to a central theme clearly and effectively, and on voice, mechanics, and platform deportment.

Promotional Bulletin Board – SkillsUSA chapters create bulletin board displays based on the annual SkillsUSA theme. The bulletin boards promote SkillsUSA, career and technical education in general and related occupational information. An accompanying notebook documents the development and construction of the bulletin board. A team of three students delivers an oral presentation explaining the process, purpose, and educational value.

***Promotional Poster** – A team of two students use provided materials to create a poster to promote a given theme. Teams must adhere to a budget to purchase creative supplies and participate in an interview with judges regarding their creative process.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

Quiz Bowl – The Quiz Bowl assesses a team of five competitors' ability to quickly respond to questions covering the areas of academic knowledge, professional development, and current events, responding to a question by activating a buzzer system. The teams receive one point for a correct answer and lose a point for each incorrect answer. Preliminary and final rounds are one hundred questions each.

Related Technical Math – On a written exam, contestants demonstrate skills required to solve mathematical problems commonly found in the skilled trades and professional and technical occupations, including basic math; applied word problems; percentages; ratios; averages; area; volume; metric and imperial measures and trigonometry.

T-Shirt Design – The contest assesses the ability of the competitor to design and produce a drawing of that design, as well as give a presentation regarding all aspects of his or her creation of the design.



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

MANUFACTURING:

Additive Manufacturing – Contestants demonstrate their ability to use 3D CAD, design for the advantages of additive manufacturing, account for limitations of major 3D printing technologies, advocate for design choices, and use creativity to solve physical problems with real constraints.

Automated Manufacturing Technology – The contest evaluates teams of three for employment in integrated manufacturing technology fields of computer aided drafting/design (CAD), computer aided manufacturing (CAM), and computer numerical controlled machining (CNC). CAD operators construct the part geometry; the CAM operator generates the tool paths; and the CNC operator sets up and machines the part.

CNC Milling – The contest assesses the ability to write the CNC program for a part, drawing and materials, determine tool offsets, setting up the machine and producing a part on a milling machine in such areas as: basic machining skills, CNC programming, setting up a CNC machine, performing mathematical calculations related to CNC, communication, and inspection.

CNC Technician – Contestants compete in NIMS Level I & II manual machining skills and knowledge areas including operation of manual milling machines, lathes, drill presses, and surface grinders. Contestants demonstrate knowledge of CNC programming skills using a PC and related knowledge and skill in the areas of engineering drawing interpretation, GD&T, technical math, machining practices, use of precision measuring/hand tools and ability to communicate verbally using proper industry terminology.

CNC Turning – The contest assesses the ability to write the CNC program for a part drawing and materials, determine tool offsets, setting up the machine and producing a part on a lathe in such areas as: basic machining skills, knowledge of CNC programming, setting up a CNC machine, performing mathematical calculations related to CNC, communication, and inspection.

Mechatronics – Contestants assemble, adjust, and test an automated machine system, troubleshoot, and repair a faulty machine system and take a comprehensive written test. Teams of two compete in a construction phase and a troubleshooting phase, as well as an oral interview.

Residential and Commercial Appliance Technology – Contestants rotate through stations diagnosing common service issues on refrigerators, washers, dryers, ranges, microwave ovens and dishwashers. Contestants also demonstrate their ability to braze by assembling a copper and steel tubing project per a schematic provided.

Technical Drafting – The contest focuses on the solution of industry-developed problems by applying appropriate technical drafting skills and tools including computer-aided drafting (CAD).



SkillsUSA Florida: State Contests by Sector 2021 – 2022

Competitive events offered by SkillsUSA Florida at the annual State Leadership and Skills Conference aligns with a sector, or career cluster, [as defined by the Florida Department of Education](#). For specific contest guidelines and eligibility, refer to the official technical standards.

TRANSPORTATION, DISTRIBUTION AND LOGISTICS:

Automotive Refinishing Technology – Contestant demonstrate the ability to perform jobs and skills based on the task list outlined by the National Institute for Automotive Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). The competition includes a series of workstations including surface preparation; spray gun operation; paint mixing, matching, and applying; solving paint applications problems; determining finish defects, causes, and cures; and utilizing safety precautions.

Automotive Service Technology – Contestants demonstrate their ability to perform jobs and skills based on the task list outlined by the National Institute for Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). Workstations consist of on-vehicle, simulations, bench and component testing, and a written test. Contestants demonstrate technical competency, accuracy, quality, safety, and ability to follow directions.

Aviation Maintenance Technology – Contestants perform tasks that represent the types of maintenance encountered by technicians in the aircraft industry. The contest scope is consistent with the airframe and power plant mechanics certification guide published by the Federal Aviation Administration (FAA).

Collision Damage Appraisal – The contest aligns with the Collision Repair/Refinishing Technician Task List outlined in the guidelines published by the National Institute for Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). Contestants demonstrate their ability to perform jobs and skills based on handwritten estimating, computerized estimates/appraisals, frontal damage, unibody damage, light mechanical damage, rear damage including quarter panel replacement.

Collision Repair Technology – Contestants demonstrate their ability to perform jobs and skills based on the task list outlined by the National Institute for Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). The competition includes a series of workstations to assess skills in metal straightening, welding, plastic repair, and structural analysis.

Diesel Equipment Technology – Students complete stations related to testing and troubleshooting engines, electrical and electronics systems, and power train systems including chassis, transmissions, and carriers. Contestants also demonstrate skills in hydraulic systems, vehicle inspections, fundamental failure analysis, brake systems, air-conditioning systems, and general shop skills.

Maintenance Light Repair (MLR) – The contest is consistent with the auto maintenance and light repair task list outlined in guidelines published by the National Institute for Automotive Service Excellence (ASE) and the ASE Education Foundation.

Marine Service Technology – Test stations include aspects of 2- & 4- stoke outboard, stern drive and inboard troubleshooting and repair. Students demonstrate proficiency in marine electrical/ignition systems, fuel systems, cooling systems, lubrication systems, drive/transmission systems, and boat and trailer rigging and repair.

Motorcycle Service Technology – Contestants perform technical skills including performing scheduled maintenance tasks; use of service, electrical diagnostic, and parts manuals; precision measurement; brake service; chassis/suspension service; fuel delivery system inspection and repair; transmission and drive systems; and power train systems on Harley-Davidson motorcycles.

Power Equipment Technology – Students know and understand both 2- & 4- cycle engines and the related theories, including understanding drive trains, hydraulic, and wiring schematics.