



# Career Pathways

## Industrial & Engineering Technology

### ELIGIBILITY

Open to a team of three (3) active SkillsUSA members from the same local chapter (school) enrolled in the same recognized Career Pathways state-approved career and technical education program. Each school may send one high school and one college/postsecondary team.

#### ***Industrial and Engineering Technology:***

- 1. Architecture and Construction: Designing, planning, managing, building and maintaining physical structures, including roadways and bridges and industrial, commercial and residential facilities and buildings.***
- 2. Manufacturing: Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical and support activities such as production planning and control, maintenance and manufacturing/process engineering.***
- 3. Science, Technology and Math: Planning, managing and providing scientific research and professional and technical services (eg., physical science, social service, engineering) including laboratory and testing services and research and development services.***
- 4. Transportation Distribution and Logistics: Planning, management and movement of people, materials and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.***

A full team must be registered. Teams of fewer than three members will be penalized one-third or two-thirds of the possible points, based on the number of team members missing. See General Regulations for more information about substitution and penalty rules.

Teams must be entered in, and their project's focus be on the Career Pathways aligned to the competitors' course enrollment. Each individual competitor must submit a copy (in the binder for District Level Progressive Content) of the team's letter from the appropriate school official (i.e., CTE administrator, principal, instructor, etc.) on school letterhead which simply states:



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*“I certify that [list your team member names] meets the eligibility requirements for the SkillsUSA Championships Career Pathway Showcase [Pathway Name] competition. The team members are/were enrolled in the following program of study or course [list applicable program/course(s)]. Signed, [school official].”*

### **CLOTHING REQUIREMENTS**

Please follow the SkillsUSA National Technical Standards Clothing Guidelines or your District Level Clothing Requirements.

#### **Class A: SkillsUSA Official Attire**

- Official SkillsUSA red blazer or official SkillsUSA red jacket
- Button-up, collared, white dress shirt (accompanied by a plain, solid black tie or SkillsUSA black tie), white shirt (collarless or small-collared) or white turtleneck, with any collar not to extend into the lapel area of the blazer, sweater, windbreaker or jacket
- Black dress slacks or black dress skirt (knee-length at minimum)
- Black closed-toe dress shoes

**Note:** The official SkillsUSA windbreaker, sweater and black Carhartt jacket are no longer available for purchase in the SkillsUSA Store. However, these clothing items are grandfathered in as previous official SkillsUSA clothing and can be worn in SkillsUSA competitions as directed in this document.

**Note:** Wearing socks or hose is not required. If worn, socks must be black dress socks and hose must be either black or skin-tone and seamless/non pattern.

These regulations refer to SkillsUSA Championships Clothing Classifications that are pictured and described at [skillsusastore.org](http://skillsusastore.org). If you have questions about competition uniforms, call the SkillsUSA Store at 888-501-2183.

### **SAFETY REQUIREMENTS**

The SkillsUSA Technical Committee and Judges are released from all responsibility relating to personal injury resulting from the use of the equipment. Contestants will be removed from competition if they are using the equipment in an unsafe manner.



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### **EQUIPMENT AND MATERIALS SUPPLIED BY HOST**

1. One approximate 7'10"-wide by 7'10"-deep space supplied with one uncovered table and two chairs. Note: The space and table provided will be the same size for each team. For District Level Progressive Content, this size may be adjusted to meet space accommodations.

**Dimensions should be provided to competitors prior to District Competition.**

### **EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT**

1. All students must have a one-page, typewritten resume.
2. Project for display
  - a. PowerPoint only for Districts (after Districts make sure to follow the National Scope)
3. Red 1" binder (Official SkillsUSA Binder is not required at the District Level) provides documentation and intentions for your project.
4. All competitors must submit a copy (in the binder for District Level Progressive Content) of the team's letter identifying their program of study or course(s) and their state's applicable aligned career cluster(s). Review Eligibility above.

### **SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)**

*(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)*

1. The Progressive Content is the minimum requirements for the District Level. Progress beyond the District Level (found in the National Technical Standards) is acceptable.

### **KNOWLEDGE PERFORMANCE**

There is no general knowledge test required in this competition.

### **SKILL PERFORMANCE**

The student teams will use their Career Pathway as the basis of a project that will benefit their class, school, community, or industry. The project must highlight an aspect of the team's career cluster training. Upon completion of the project, the students will develop a display and use it within their community to explain their training and their project. This competition will judge mastery of their training, its application, the project's benefit to their community, and presentation techniques.



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### Competition Guidelines

1. A team consisting of three (3) students enrolled in the same recognized Career Pathways program must present the project (PowerPoint); students may only be members of one team.
2. Emphasis is placed on the project, the display, and the presentations/demonstrations.
3. The project must be related to the program of study of the team members. Registration in the appropriate Career Pathway competition is based on the program of study or the course in which the student team members are/were enrolled.
4. Panels of judges, selected from business, labor, education and government, will evaluate projects.

### Project Requirements

1. Time limit: The presentation/demonstration shall be at least four (4) minutes in length but shall not exceed eight (8) minutes.
  - a. A Penalty: five (5) points will be deducted for each 30 seconds or fraction thereof under four (4) minutes or over eight (8) minutes.
  - b. Judges will ask questions for a period not to exceed two (2) minutes.

### Judging Criteria

Each project will be judged according to its own merits and compliance with the listed criteria, as well as competitively within each Career Pathway. Participants should read the guidelines carefully and make sure the project presentation (PowerPoint presentation) covers all the criteria.

1. **Knowledge Attained (15 points):** Students should, through written (PowerPoint) and oral presentations, demonstrate the achievement of core knowledge related to their Career Pathway.
2. **Demonstration/Evidence of Technical Skill (15 points):** Through the PowerPoint demonstrations, photographs, products and other media, students should show evidence or share the intent of (prior to PA SLSC) technology skills appropriate for their career level and pathway.
3. **Presentation Skills (20 points):** Students should demonstrate appropriate mastery of skills in communication, answering questions and explaining processes related to their projects.
  - a. Each student team member must take an active role in the presentation/demonstration.
  - b. Use of technology for the presentation is encouraged (only PowerPoint is needed at the District Level). Videos with sound and speaking parts are not to be used -
  - c. all speaking parts need to be presented by the team.



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4. **Integration of Business and Industry (15 points):** The project must demonstrate evidence of integration and/or cooperation with business and industry. This must include at least one of the following:
  - a. Students working in the industry or evidence they will be working prior to PA SLSC.
  - b. Business and industry partner assistance and guidance at the school or evidence they will be partnering prior to PA SLSC.
  - c. Application of the project to an industry setting or evidence they will be prior to PA SLSC.
5. **Community Impact (15 points):** The project must reflect impact to the community, related business field or related field of study as determined by the Career Pathway.
6. **Overall Effect (10 points):** Students project a businesslike and professional manner. Project and presentation are well-organized; students display knowledge of, and enthusiasm for, the project and its contribution to the community, business or related field of study. Displays must clearly convey the purpose (intent) of the project.



# Career Pathways Industrial & Engineering Technology

## Career Pathways Industrial & Engineering Technology Rubric

Items evaluated	Possible points	Contestant score
Knowledge Attained	15 points	
Demonstration/Evidence of Technical Skill	15 points	
Presentation Skills	20 points	
Integration of Business and Industry	15 points	
Integration of Business and Industry	15 points	
Overall Effect	10 points	
	Subtotal =	90
Clothing Penalty	(Deduction)	-5
No resume	(Deduction)	-10
	Total	

*Note: No cell phones or other wearable electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.*

*Note: Scorecards should only be used as guidance. Changes may occur.*

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