



Telecommunications Cabling Contest Information

Tentative -Information is subject to change check back often

by Mitchell Thomas — Last modified Mar 5, 2023

Note: This competition is will now be held at the Tulsa Technology Center Riverside Campus!

Written testing for most contests will be held ON-LINE through your schools' Testing Liaison. Testing will be open beginning Monday, March 15th.

Students will receive an email from National Skills USA for testing.

The deadline for taking the on-line tests is Friday, April 7th.

No provisions are being made for make-up testing on-site.

NO Substitutions will be allowed this year after April 7th

See the State SkillsUSA Director's Memo for the policy on substitutions and late registrations.

Each contestant will be required to bring his or her printed resume. It will be presented to the judges upon entry to the contest area. A deduction will be applied to your overall score if you do not have a resume

CONTESTANT MEETING

There WILL be a contestant meeting at **3 p.m.** the evening before the event at **Tulsa Technology Center – Riverside Campus**, to get your contestants oriented to the Telecommunications Cabling contest layout and equipment, go over the format of the contest, and to hand out documentation they will need to study to be prepared to begin promptly in the morning. This meeting will be held in the Telecommunications Cabling contest area and should only take approximately an hour. Question and answer time will be allowed.

MOVE OUT

After the contest, all workstations must be disassembled and prepared for shipping. Please have your contestants stack the panels neatly for transport on pallets or 4x4's to allow the forklift to get under them without re-stacking.

The contest area must be cleaned, swept, tables stacked, and all tape removed from the floor. **This is the responsibility of instructors and contestants.**

PURPOSE

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of telecommunications cabling.

INDUSTRY AWARDS

As agreed at August Conference each instructor is requested to secure a minimum of \$50 in prizes for each student that you bring to the State SkillsUSA Championships. Please contact Bryan Hallmark bhallmark@kct.edu for details and to let him know of industry awards you have secured. I know many of you have already been hard at work securing the awards. These awards should be labeled with the name, address, and contact person for the donating industry so that the contestant they are awarded to can send an appropriate expression of his or her appreciation.

TOOLS and SUPPLIES

Supplied by the technical committee:

Mock wall, cable ladder, equipment racks, patch panels, telecommunications outlets, termination blocks and modular plugs.

Tools, equipment, and consumables to terminate and splice fiber optic cable

Supplied by the participants:

Each competitor is required to bring the following tools/equipment to the Telecommunications Cabling competition. (with some major tools, contestants may share if school does not have sufficient to equip all contestants, but may delay some operations to share)

- Cable terminating tools (cutters, strippers, crimpers, punch-down, spudger) necessary to properly terminate the following:
 - Cat 6
 - Cat 5 or 5e
 - 66 blocks
 - 110 blocks
 - RG6
- Cable: Supplies MUST be limited to these listed. No additional cable may be brought. Each contestant should have their own pre-cut, measured lengths (no working from shared spools). The intent is to reward efficiency of materials, not allow unlimited do-overs. Contestants MUST be able to complete the projects with the materials listed below.
- 50 feet – Cat 6 Cable
- 4 – 3' lengths of Cat 5 or 5e Cable
- 1 – 3' length of RG6 Cable

- 3 feet – 25 pair, 22 -24 AWG (Cat 5 preferred, may utilize Cat 3 -Type NT – T130 or equivalent)
- Connectors
- 4 – 8P8C connectors
- 2 – RG6 compression-type connectors
- DMM
- Tester to check continuity
- Electrician’s Scissors
- Cable Stripping Tools
- Cable Pulling Tools
- Fish Tape
- Pull String
- Electrical Tape
- Safety Glasses
- Hard Hat
- Snacks
- Bottled Water

CONTEST DESCRIPTION AND SCORING

The contest will consist of an online SkillsUSA (PDP) knowledge test, online written test covering knowledge of telecommunications concepts and practices, and practical hands-on activities that will measure the contestants’ skill in common telecommunications tasks. The written test will contribute 10 percent to the total score and 87.5 percent will be divided among the various practical tasks as assigned by the technical committee and the telephone technical support station. The SkillsUSA PDP test accounts for 2.5 percent, which is consistent with National SkillsUSA competition.

Written Evaluation

The purpose of the written portion of the contest is to test a student’s complete knowledge of structured cabling. Questions from the written evaluation will be taken from the following general telecommunications cabling topic area:

- Pulling
- Copper Media (UTP cabling)
- Fiber Optic Media
- Firestopping
- Grounding and Bonding
- Horizontal Cabling
- Installation of Support Structures
- Plan (blueprints and drawings?)
- Safety Practices
- Splicing
- Standard and Codes
- Telecommunications Cabling Systems
- Testing UTP Cabling

- Transmission Theory
- Troubleshooting

Project Evaluation

The purpose of the project component of the contest will be to test a student's ability to install, terminate and manage telecommunications cabling. Given a plan for a telecommunications cabling project, the contestant will install and test their system. The students must, in finite amount of time, complete the cabling project and certify it for use. This would be similar to doing installations in a telecommunications room. The client would request an upgrade to voice, data and cable television services. The contestants, given equipment and tool, would install the appropriate connectivity for the upgrade. Skills that are to be evaluated are listed below.

- Knowledge of the color code for 4-Pair and 25-Pair UTP Cabling
- Conduit cable pulling techniques
- Cable Ladder cable pulling techniques
- Installation of a ground conductor
- Installation of a bonding backbone
- Installation of a firestopping system for conduit
- UTP patch panel installation
- UTP wall outlet installation
- Terminate a 66 style connecting block
- Terminate a 110 style connecting block
- Install UTP style, 8-conductor modular outlets
- Install coaxial "F" style connectors
- Install coaxial BNC style connectors
- Test UTP and coaxial cabling continuity
- Install fiber optic terminations and splice