



**TECHNICAL
COMPUTER APPLICATIONS**

PURPOSE

To evaluate each competitor's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of technical computer applications.

ELIGIBILITY

Open to active NYS SkillsUSA members enrolled in programs with computer literacy as an occupational objective.

CLOTHING REQUIREMENTS

NYS SkillsUSA Business Professional

- White polo shirt (plain or with SkillsUSA or SkillsUSA NY monogram) or White dress shirt with
- plain black tie with no pattern or a SkillsUSA black tie, or business like white collarless blouse or white blouse with small plain collar.
- Black dress slacks (accompanied by black dress socks or black or skin-tone seamless hose) or black dress skirt (knee-length, accompanied by black or skin-tone seamless hose).
- Black leather shoes that are not backless or open toe

Note: Contestants must wear their contest clothing to the contest orientation meeting. Also bring #2 pencil, resume, and safety assurance form.

EQUIPMENT AND MATERIALS

1. Supplied by NY Chair/committee:
 - a. Table and chair
2. Supplied by the contestant:
 - a. Computer with the following minimum specifications.
 - i. Computer/laptop
 - ii. Computer with 5G Wi-Fi (5G Wi-Fi adapters can be found on Amazon, if needed).
 - iii. Full administrative rights with all user passwords disabled or uninstalled.
 1. Software suite accessibility, including a minimum of word processing, spreadsheet, data base presentation software.
 - b. Pen/pencil
 - c. All competitors must create a one-page resume. See “Resume Requirement” below for guidelines.

Note: No phones or tablets will be allowed during the competition.

RESUME REQUIREMENT

Competitors must create a one-page resume to submit at orientation.

DEVICES

Cell phones or other electronic devices not approved by the NYS Chairperson will be collected by the contest chair during the competition. Chairpersons will announce their acceptance by listing it on their standard or at the orientation meeting. In case of emergencies advisors should allow the competitors to take their phones to the contest areas.

If the competitor uses their device in a manner which compromises the integrity of the competition, the competitor’s score may be penalized.

SCOPE OF THE COMPETITION

This competition is defined by industry standards and assesses the ability of a competitor to perform jobs and skills selected from the list of competencies as determined by the SkillsUSA Championships technical committee.

KNOWLEDGE PERFORMANCE

This portion of the competition will be a computer-based knowledge exam. Competencies evaluated on the written exam are in-line with the latest version of the IC3 exams. Competitors are also required to take the SkillsUSA professional development test at orientation.

SKILL PERFORMANCE

A series of demonstrations will be completed during the skill performance portion of the competition. The competencies outlined by the technical committee will be used as the foundation for this assessment. Competitors should be familiar with using a Windows, Linux, and/or macOS-based operating system. All work must be done independently.

STANDARDS AND COMPETENCIES

TECH 1.0 — Administer topics relating to the Internet standards and guidelines as set forth by the technical committee

- 1.1. Describe email functions
- 1.2. Demonstrate knowledge of cloud computing
- 1.3. Explain networking processes
- 1.4. Display knowledge of server installation
- 1.5. Describe wireless and Bluetooth technology

TECH 2.0 — Install and configure an operating system per standards and guidelines as set forth by the technical committee

- 2.1. Modify the configuration setting for an operating system
- 2.2. Create users and policies for users
- 2.3. Manipulate application software as needed
- 2.4. Demonstrate technical troubleshooting ability
- 2.5. Display an ability to work in a team environment to develop solutions to common business problems

TECH 3.0 — Demonstrate the use of application software per standards and guidelines as set forth by the technical committee

- 3.1. Use features in data management
 - 3.1.1. Importing and exporting data
 - 3.1.2. Knowledge of SQL and DML (Data Manipulation Language)
 - 3.1.3. Web & data source scraping, including data from APIs
 - 3.1.4. Creating and editing reports
 - 3.1.5. Normalizing and denormalizing
 - 3.1.6. Developing and maintaining data schemas

- 3.1.7. Data security best practices
- 3.1.8. Analyzing data for common business purposes
- 3.2. Use features in word processing
 - 3.2.1. Format text and paragraphs
 - 3.2.2. Apply and format columns
 - 3.2.3. Insert and modify content in headers and footers
 - 3.2.4. Modify document layout and page setup
 - 3.2.5. Create new documents using a template
 - 3.2.6. Review and modify document properties
 - 3.2.7. Organize documents using file folders
 - 3.2.8. Save documents in appropriate formats for different users
 - 3.2.9. Print documents, envelopes, and labels
 - 3.2.10. Preview documents and Web pages
 - 3.2.11. Insert and edit text, symbols, and special characters
 - 3.2.12. Insert frequently used and pre-defined text
 - 3.2.13. Navigate to specific content
 - 3.2.14. Insert, position and size graphics
 - 3.2.15. Create and modify diagrams and charts
 - 3.2.16. Locate, select, and insert supporting information
 - 3.2.17. Change and organize document views and windows
 - 3.2.18. Insert and modify tables
 - 3.2.19. Create bulleted lists, numbered lists, and outlines
 - 3.2.20. Insert and modify hyperlinks
 - 3.2.21. Circulate documents for review
 - 3.2.22. Compare and merge documents
 - 3.2.23. Insert, view, and edit comments
 - 3.2.24. Track, accept and reject proposed changes
- 3.3. Use features of spreadsheets
 - 3.3.1. Enter and edit cell content
 - 3.3.2. Locate specific cell content
 - 3.3.3. Locate, select, and insert supporting information
 - 3.3.4. Insert, position and size graphics
 - 3.3.5. Filter lists using the AutoFilter feature
 - 3.3.6. Sort lists
 - 3.3.7. Insert and modify formulas
 - 3.3.8. Use statistical, date and time, financial and logical functions
 - 3.3.9. Create, modify and position diagrams and charts based on worksheet data
 - 3.3.10. Apply and modify cell formats
 - 3.3.11. Apply and modify cell styles
 - 3.3.12. Modify row and column formats
 - 3.3.13. Format worksheets
 - 3.3.14. Insert, view, and edit comments
 - 3.3.15. Create new workbooks from templates
 - 3.3.16. Insert, delete and move cells
 - 3.3.17. Create and modify hyperlinks
 - 3.3.18. Organize worksheets

- 3.3.19. Preview data in other views
- 3.3.20. Customize window layout
- 3.3.21. Build and develop complex formulas involving multiple sheets and/or logic statements
- 3.3.22. Organize workbooks using file folders
- 3.3.23. Save data in appropriate formats for different uses
- 3.4. Use features in presentation software
 - 3.4.1. Create new presentations from templates
 - 3.4.2. Insert and edit text-based content
 - 3.4.3. Insert tables, charts, and diagrams
 - 3.4.4. Insert pictures, shapes, and graphics
 - 3.4.5. Insert objects
 - 3.4.6. Format text-based content
 - 3.4.7. Format pictures, shapes, and graphics
 - 3.4.8. Format slides
 - 3.4.9. Apply animation schemes
 - 3.4.10. Apply slide transitions
 - 3.4.11. Customize slide templates
 - 3.4.12. Work with masters
 - 3.4.13. Track, accept and reject changes in a presentation
 - 3.4.14. Add, edit, and delete comments in a presentation
 - 3.4.15. Compare and merge presentations
 - 3.4.16. Organize a presentation
 - 3.4.17. Set up slide shows for delivery
 - 3.4.18. Rehearse timing
 - 3.4.19. Deliver presentations
 - 3.4.20. Prepare presentations for remote delivery
 - 3.4.21. Save and publish presentations
 - 3.4.22. Print slides, outlines, handouts, and speaker notes
 - 3.4.23. Export a presentation to another Microsoft Office program
- 3.5. Web page development tools
- 3.6. Web browser

TECH 4.0 — Complete a hands-on demonstration of basic programming & scripting per standards and guidelines as set forth by the technical committee

- 4.1. Exhibit knowledge of one or more scripting languages (JavaScript, Python, Ruby, PowerShell, etc.)
- 4.2. Demonstrate ability to outline logic flow of common business scenarios
- 4.3. Employ knowledge of networking data flow