

# SkillsUSA WI Technical Standards

## Industrial Robotics High School / Technical College

### PURPOSE

To evaluate each competitor's ability to plan, program, and execute an automated solution to a real-world, material-handling challenge using a 6-axis Industrial Robot workcell.

### ELIGIBILITY

This contest is open to active SkillsUSA members.

A limit of **three** students per team from each school may enter.

*This is a state-only contest. There is no corresponding national contest. Winning this contest does not qualify the participant to attend the National Leadership and Skills Contest.*

### CLOTHING REQUIREMENT

#### Class E: Competition Specific – Business Casual

- Official SkillsUSA white polo shirt
- Black dress slacks or black dress skirt (knee-length minimum)
- Black closed-toe dress shoes

These regulations refer to clothing items that are picture and described at [www.skillsusastore.org](http://www.skillsusastore.org). If you have questions about clothing or other logo items, call 1-888-501-2183.

### EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
  - a. FANUC 6-Axis Industrial Robot Workcell
  - b. Robot End-of-Arm-Tooling
  - c. Workholding Fixtures and Material Handling Challenge Components
  - d. Robot Program Planning Matrix
2. Supplied by the competitor:
  - a. USB Flash Drive (to save and submit final program documentation)
  - b. Ballpoint pens or sharpened pencils
  - c. Blank notebook paper
  - d. Machinist Rule and/or Tape measure
  - e. All competitors must create a one-page resume. See “resume Requirement” below for guidelines.
  - f. Optional: Calculator
  - g. Optional: Laptop Computer for planning and program notes

### RESUME REQUIREMENT

Competitors must create a one-page resume to submit in-person on the day of your scheduled competition session. Failure to submit a resume will result in a 10-point penalty.

## **PROHIBITED DEVICES**

Cell phones or other electronic devices not approved by the competition's technical committee are *NOT* allowed in the competition area. Please follow the guidelines in each technical standard for approved exceptions. Technical committee members may also approve exceptions onsite if deemed appropriate.

### **Penalties for Prohibited Devices**

If a competitor's electronic device makes noise or if the competitor is seen using it any time during the competition, an official report will be documented for review by the SkillsUSA Director. If confirmed that the competitor used the device in a manner which compromised the integrity of the competition, the competitor's scores may be cancelled.

## **SCOPE OF THE COMPETITION**

The competition uses competencies identified in the FANUC HandlingTool Operations and Programming Course. The specific Material Handling Challenge chose for this competition will be determined by the Wisconsin Industrial Robot Competition technical committee.

## **KNOWLEDGE PERFORMANCE**

Prior to your scheduled Skill Performance Session, all competitors must complete a written test assessing knowledge of the core FANUC HandlingTool Operations and Programming course competencies.

## **SKILL PERFORMANCE**

The competition includes a Material Handling challenge consisting of background information and program specifications using provided End-of-Arm-Tooling (EOAT), workcell fixtures, and description of program output requirements. An appropriate, (successfully executable) robot program from design notes and instructions will be developed.

## **COMPETITION GUIDELINES**

1. All competitors will receive a competition rubric 1-month prior to the State Conference
2. All competitors will receive the official competition Material Handling challenge and prompt approximately 24-hours prior to the start of the State Conference.
3. Robot program solutions will be scored on the following criteria: completeness, efficiency of code, program documentation, recorded validation of completed program solution, and quality of work.
4. The competition will also include a knowledge-based, multiple choice test to assess competitor's ability to answer questions typical of an entry-level position for a robot programmer and operator. All competitors will take the knowledge-based test individually.

## **STANDARDS AND COMPETENCIES**

See attached HandlingTool Operations & Programming Course Overview Document.

## Sample Resume for Job Interview Contest

### Shiloh Misoki

5445 Old Rd.

Cooksville, WI 54245

715.431.0982

Shiloh.misoki@gmail.com

### Objective

To obtain a position in the field of culinary arts where I can utilize my existing skills while learning additional techniques.

### Education

Cooksville High School, Cooksville, WI  
2011-present

GPA 3.85/4.0

### Employment

**Cooksville Café**, Cooksville, WI  
Waitress

5/2012-present

- Deliver food with excellent customer service
- Manage cash register to process payments
- Promptly resolve customer concerns

**Sharon Hill**, Lisbon, WI

Childcare Provider

8/2010-5/2012

- Supervised three children
- Prepared meals and snacks
- Developed structured activities with neighborhood children

### Activities

- SkillsUSA 8/2011-present
  - Chapter Vice-President 8/2012-present
  - Fundraising Committee Member 8/2011-5/2012
  - 2<sup>nd</sup> Place Job Demonstration 5/2011
  - Active Participant in Community Service Projects
- Volleyball 8/2011-present
- Holy Family Church 8/2012-present
  - Sunday School Volunteer

### Achievements

- High Honors 2011
- Varsity Letter—Volleyball 2011
- Completed Level 2 of Professional Development Program 2012

### Skills

- Proficient with Microsoft Word, Excel, Powerpoint and Outlook
- Demonstrated ability to work effectively independently as well as contribute to teams
- Current CPR/1<sup>st</sup> Aid Certification for adults, children and infants

### References

Available upon request