

**2019 INDIANA SkillsUSA CHAMPIONSHIPS  
TASK AND MATERIALS LIST**

**SKILL OR LEADERSHIP AREA:** HVACR

**CONTEST LOCATION:**

Carrier Corporation  
7310 W. Morris St.  
Indianapolis, IN 46241

**DATE:** Saturday April 20, 2019

**TIME: 8:10 am bus leaves West Pavilion**

**8:30 am arrive at Carrier**

**8:45 am be in contest area**

**9:00 am contest begins**

**CLOTHING REQUIREMENTS:**

*NO SCHOOL LOGO OR SCHOOL AFFILIATION ANYWHERE ON CLOTHING or IT MUST BE COVERED COMPLETELY. \*\*\* SEE BELOW \*\*\**

**\*AWARDS CEREMONY DRESS CODE\***

*A Dress Code will be enforced during the Awards Ceremony. To accept an award "on-stage", the student must wear the "Official SkillsUSA Uniform", State T-Shirt or the competition attire. NO SHORTS OR HATS!!!*

***EACH COMPETITORS MUST PROVIDE A 1 PAGE RESUME' AT THE BEGINNING OF THE CONTEST, THERE IS A 10 PT. DEDUCTION IF ONE IS NOT TURNED IN AT THIS TIME.***

Carrier Corporation will sponsor the 2019 Indiana State SkillsUSA Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) competition, Saturday, April 20th. The criteria and requirements for the competition were selected from the SkillsUSA literature provided by the Indiana SkillsUSA committee.

Please provide a copy of this letter to all participating schools.

**Location**

Carrier Corporation, 7310 West Morris Street, Indianapolis, Indiana, is located at the northwest corner of Girls School Road and Morris Street. The competition will be held in the Residential Engineering Design Center from 9:00am. To 12:00pm. The Design Center is the smaller of the two buildings. All contestants are to be prompt and arrive at 8:45am.

**Purpose**

This competition is to select the very best individual(s) to represent the state of Indiana at the national competition. This is not an evaluation of instructors' methods or the curriculum of a school's program.

**Conduct**

Required conduct and attire is outlined in SkillsUSA Technical Standards. We do not require the SkillsUSA official white uniform, but all contestants will be required to dress and conduct themselves in a professional manner.

The following items will be prohibited by students:

- use of tobacco products while on Carrier property
- use of cell phones, pagers, or PDAs
- loose clothing that may be caught in machinery
- clothing which advertises alcohol or tobacco products
- clothing with vulgar characters or language
- clothing that indicates program or school affiliation

## Safety

Contestants **must have and wear safety glasses** in all Skills lab areas. Points will be deducted if safety glasses are not worn. Tinted safety glasses must be worn for the brazing exercise, per Carrier's Safety Policy. These tinted glasses will be provided by Carrier for the students to use during the event. Students should practice brazing using similar tinted glasses before the day of contest to get acclimated.

Gloves will be provided in competition areas where they are considered a safety requirement.

Steel shoes must be worn in some contest areas. If the contestant does not have steel toe shoes, steel toed boot covers will be provided.

Points will be deducted if basic safety rules are not observed.

## Skills

Any instructor on site during the competition will need to remain outside of the competition areas during the contest. They will be offered a tour of the facility before the students compete.

- 1) Written examination (10% of overall score, 30 minutes)

Bring pencils and erasers. Examination will cover basic installation practices for residential HVAC equipment. It will also cover equipment selection from manufacturers' literature.

- 2) Airflow Measurement (30% of overall score, 30 minutes)

Measure airflow of a Fan Coil (Electric Furnace) using one of the following methods: Temperature Rise or Static.

- 3) Brazing exercise (30% of overall score, 45 minutes)

Braze (Oxygen/Propylene) diagrammed tubing assembly to scale using standard installation fittings and copper tubing. Torches will be set for the students if needed.

- 4) System Troubleshooting:

Cooling (15% of overall score, 15 minutes)

Heating (15% of overall score, 15 minutes)

Student must have understanding of troubleshooting residential air conditioning/refrigeration and gas furnace systems.

- 5.) Ice Machine Demonstration

If time allows a short training session will be provided for the students (either one-on-one or as a group) to familiarize the students with ice machines and the basic refrigeration cycle. No points will be awarded for this event. It is strictly for demonstration purposes only.

## **Tools**

Carrier will provide all tools necessary to complete each event for the students. However, the students will still be allowed to use their own tools, should they deem it necessary. No points will be deducted for lack of tools on the student's behalf. Event judges will instruct the student on how to use a particular tool or piece of equipment if needed (for example, a volt-meter, temperature probe, or torches).

Torches using oxygen/propylene (similar to oxygen /acetylene) will be used for the brazing event. Contest judges will light the torch for students if necessary before the exercise begins.

## **Awards**

Scores for the Heating, Ventilation, Air Conditioning and Refrigeration event will be announced during the awards ceremony and not at the competition site.

Revised 3/8/19