

# **Collinsville Area Vocational Center**

Building Trades 1 and 2  
2019-2020

**2. Course Title:** Building Trades 1 and 2

**3. Semester Hours:** 3      **Lecture Hours:** 5      **Lab Hours:** 2

**4. Course Description:** The construction students will explore the basic trades' skills required to complete a modern building project. The course will survey carpentry, ironwork, laborer's work, sheet-metal and concrete finishing.

**5. Prerequisites:** none

**6. Course Objectives:** Upon completion of this course the student will be able to:

1. Identify the craft skill requirements for each trade studied.
2. Identify common tools used by each trade studied.
3. Identify jurisdiction assignments for each trade studied.
4. Identify craft union jurisdictions.

**7. Methods of Presentation:** Lecture, demonstrations, field trips, slides, and videos.

**8. Text and Other Materials:**

- "Carpentry 3<sup>rd</sup> edition"—Delmar
- Safety Handout Material
- Various informational handouts

**9. Methods of Student Evaluations:** Tests, Term Project, Lab Exercises, Classroom, and Homework.

**10. Course Outline:**

A. Carpentry

1. Scope of the Work
2. Tools Common to the Trade
3. Basic Wood Cutting Tools
4. Wood Fasteners
5. Build a simple wood tool box
6. Safety

B. Iron working

1. Scope of the Work
2. Tools Common to the Trade
3. Re-bar tying and placing
4. Steel frame erection
5. Bolts and bolt specifications
6. Oxy fuel cutting
7. Fabricate steel plate to blueprint specifications
8. Safety

C. Laborers

1. Scope of the work

2. Tools common to the trade
  3. Grading techniques
  4. Form removal
  5. Safety
- D. Sheet-metal workers
1. Scope of the work
  2. Tools common to the trade
  3. Materials
  4. Fasteners
  5. Bending Machines
  6. Simple pattern development
  7. Make box layout and assemble
- E. Concrete Finishers
1. Scope of the work
  2. Tools common to the trade
  3. Materials
  4. Form types
  5. Form Setting
  6. Concrete mixing
  7. Placing
  8. Finishes
  9. Safety

## **11. COURSE COMPETENCIES:**

### **Cognitive Domain:**

Upon successful completion of this course, the student will be able to:

1. Identify craft union skills for each trade covered
2. Identify tools common to each trade covered
3. Identify craft union jurisdictions

### **Psychomotor Domain:**

Upon successful completion of this course, the student will be able to:

1. Cut with a saw to a line.
2. Make a bolted connection.
3. Make snap ties on a re-bar.
4. Make a sheet-metal box.
5. Grade 10' x 10' rock pad to a 1" tolerance.
6. Steel trowel finish one 12' x 12' concrete patio block.

**Safety Policy and Procedure**

SAFETY RULES MUST BE FOLLOWED, to prevent accidents and to prevent loss of life, injury, illness, damage to property or equipment, and loss of production.

Without SAFETY rules there would be many accidents each year. As dumb as it sounds, SAFETY should be emphasized more than your other work. Most accidents happen when someone does not know how to operate a machine SAFELY, or they play around when they SHOULD BE WORKING!

Overall, safety rules must be followed at all times by all students in the Construction Trades Class. Failure to do so will result in the immediate dismissal of the student for the day. The class time missed for that day shall be counted against the student's total attendance grade!

**PREPARED BY:** Justin Cann

**DATE PREPARED:**

\*Revised 4/17

**FOR ADDITIONAL INFORMATION, CONTACT:** Justin Cann  
jcann@cusd.kahoks.org

## Building Trades Tool list/Uniform

This is a list of some basic hand tools our students will need to be successful in this program. As you may know we construct a full scale house from the ground up so these hand tools will help the students complete certain tasks on a daily basis. We provide the larger scale tooling that is needed.

I feel the uniform shows unity, professionalism, and a better overall appearance when we are out in the community and shows the school off well.

### Uniform:

- Pants- White painter style pants/can be found at Walmart, Rural King etc..
- Shirt- Yellow Cavc shirt(provided) Black Cavc sweatshirt(provided)

### Tools:

- Tool Belt
- 18-22 ounce Framing hammer
- Utility knife (blades not needed/will be provided)
- Chalk box. (will supply chalk)
- 6" Speed Square (stay away from orange plastic or thin metal ones)
- 25' or 30' Tape measure

If the student buys quality tools keeps track and care of them they will last many, many years to come.

**Please have tools and pants by Monday, August 28th 2017 thank you**

I asked that both the student and parent sign this form understanding the supplies that are necessary for the student to be successful in this program. I will be explaining and sending home a rubric that explains the grading scale. Having the tools and being dressed for working on the jobsite every day are about 20% of the overall grade. Thank you and I look forward to having your child.

Justin Cann-Building trades instructor

Parent Signature\_\_\_\_\_ Student Signature\_\_\_\_\_

CATEGORY	1 POINT	0.5 POINTS	0 POINTS
<b>PUNCTUALITY ORGANIZATION</b>	<p>**Meets ALL of the following standards**</p> <ul style="list-style-type: none"> <li>In class before the bell rings</li> <li>Comes to class with all needed materials</li> <li>Ready to get to work/gets started immediately on any bellwork</li> </ul>	<p>**Meets 2 of the following standards**</p> <ul style="list-style-type: none"> <li>In class before the bell rings</li> <li>Comes to class with all needed materials</li> <li>Ready to get to work/gets started immediately on any bellwork</li> </ul>	<p>**Does not meet 2 more more of these standards**</p> <ul style="list-style-type: none"> <li>In class before the bell rings</li> <li>Comes to class with all needed materials</li> <li>Ready to get to work/gets started immediately on any bellwork</li> </ul>
<b>TOOL CHECK-IN CLEAN-UP</b>	<p>**Meets ALL of the following standards**</p> <ul style="list-style-type: none"> <li>Check in Tools</li> <li>Notify teacher if tools are missing</li> <li>Handle tools properly throughout the day</li> <li>Tools are cleaned and put back in their proper place</li> </ul>	<p>**Meets 2 of the following standards**</p> <ul style="list-style-type: none"> <li>Check in Tools</li> <li>Notify teacher if tools are missing</li> <li>Handle tools properly throughout the day</li> <li>Tools are cleaned and put back in their proper place</li> </ul>	<p>**Does not meet 2 more more of these standards**</p> <ul style="list-style-type: none"> <li>Check in Tools</li> <li>Notify teacher if tools are missing</li> <li>Handle tools properly throughout the day</li> <li>Tools are cleaned and put back in their proper place</li> </ul>
<b>SHOP SAFETY</b>	<p>**Meets ALL of the following standards**</p> <ul style="list-style-type: none"> <li>Safety glasses are worn without being told</li> <li>NO horseplay</li> <li>Follows all safety procedures</li> <li>Follows emergency protocol</li> </ul>	<p>**Meets 2 of the following standards**</p> <ul style="list-style-type: none"> <li>Safety glasses are worn without being told</li> <li>NO horseplay</li> <li>Follows all safety procedures</li> <li>Follows emergency protocol</li> </ul>	<p>**Does not meet 2 more more of these standards**</p> <ul style="list-style-type: none"> <li>Safety glasses are worn without being told</li> <li>NO horseplay</li> <li>Follows all safety procedures</li> <li>Follows emergency protocol</li> </ul>
<b>ATTENTIVENESS EFFORT</b>	<p>**Meets ALL of the following standards**</p> <ul style="list-style-type: none"> <li>NO cellphones out unless discussed before class with instructor</li> <li>Completes assigned tasks</li> <li>Quiet during instruction time</li> <li>Seeking out work/does not sit around doing nothing</li> <li>Stays awake and attentive for the whole class period</li> <li>Participates in discussion</li> </ul>	<p>**Meets 3 of the following standards**</p> <ul style="list-style-type: none"> <li>NO cellphones out unless discussed before class with instructor</li> <li>Completes assigned tasks</li> <li>Quiet during instruction time</li> <li>Seeking out work/does not sit around doing nothing</li> <li>Stays awake and attentive for the whole class period</li> <li>Participates in discussion</li> </ul>	<p>**Does not meet 2 more more of these standards**</p> <ul style="list-style-type: none"> <li>NO cellphones out unless discussed before class with instructor</li> <li>Completes assigned tasks</li> <li>Quiet during instruction time</li> <li>Seeking out work/does not sit around doing nothing</li> <li>Stays awake and attentive for the whole class period</li> <li>Participates in discussion</li> </ul>
<b>RESPECT / TEAMWORK</b>	<p>**Meets ALL of the following standards**</p> <ul style="list-style-type: none"> <li>Treat fellow classmates with respect</li> <li>Help students who are stuck or struggling with a task</li> </ul>	<p>**Meets 2 of the following standards**</p> <ul style="list-style-type: none"> <li>Treat fellow classmates with respect</li> <li>Help students who are stuck or struggling with a task</li> </ul>	<p>**Does not meet 2 more more of these standards**</p> <ul style="list-style-type: none"> <li>Treat fellow classmates with respect</li> <li>Help students who are stuck or struggling with a task</li> </ul>

TOOL ID POST TEST  
PRE TEST NO PRIOR INSTRUCTION

Name: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_ 12" frame square

\_\_\_\_\_ 10" File

\_\_\_\_\_ Adjustable wrench

\_\_\_\_\_ Reciprocal saw (saw zaw)

\_\_\_\_\_ Bit accessories

\_\_\_\_\_ Framing Nailer

\_\_\_\_\_ 5" orbital Sander

\_\_\_\_\_ Drywall Jack

\_\_\_\_\_ Roto zip

\_\_\_\_\_ Gas air compressor

\_\_\_\_\_ Pipe Wrench

\_\_\_\_\_ Aviation snips

\_\_\_\_\_ T-Square

\_\_\_\_\_ Jig saw

\_\_\_\_\_ Cross cut saw

\_\_\_\_\_ 3" Belt sander

\_\_\_\_\_ Standard Screw Driver

\_\_\_\_\_ Flat bar

\_\_\_\_\_ Chalk Box

\_\_\_\_\_ 14" Finish Trowel

\_\_\_\_\_ Portable 10" table saw

\_\_\_\_\_ Coil Roofing Nails

\_\_\_\_\_ Roll Flashing

\_\_\_\_\_ 24" level

\_\_\_\_\_ Cordless Hammer Drill

\_\_\_\_\_ Speed Bore Bits

\_\_\_\_\_ Compound 12" miter saw

\_\_\_\_\_ Slap stapler

\_\_\_\_\_ Cross cut saw

\_\_\_\_\_ Mud trough

Name: \_\_\_\_\_ Sec \_\_\_\_\_ Date: \_\_\_\_\_ Teacher \_\_\_\_\_

## Eye Safety Test

### True/False

In the space provided, place a ( T ) for True and a ( F ) for False statements.

- \_\_\_\_\_ 1. Illinois law requires students and teachers to wear safety glasses or safety goggles anytime work is being performed in school laboratories.
- \_\_\_\_\_ 2. Polycarbonate plastic lenses are so tough, they resist scratching.
- \_\_\_\_\_ 3. Rinse off any dust before cleaning the lenses on safety glasses or safety goggles.
- \_\_\_\_\_ 4. The easiest way to prevent an eye injury is to wear eye protection that meets the industrial standard (ANSI Z87...).
- \_\_\_\_\_ 5. The frames of safety glasses are made of special materials for greater strength and flame resistance.
- \_\_\_\_\_ 6. Face shields may be used in place of safety glasses or safety goggles.
- \_\_\_\_\_ 7. Safety lenses are fitted into the front of the frame to prevent the lenses from being pushed into the eye in the event of impact.
- \_\_\_\_\_ 8. Safety goggles provide the most eye protection from flying particles because they fit tight to the face.
- \_\_\_\_\_ 9. Work environments involving fumes, chemical vapors, or intense heat may be situations that could damage contact lenses or make them uncomfortable or dangerous to wear.
- \_\_\_\_\_ 10. Just an impact to the eye from a blunt object can't do much damage.
- \_\_\_\_\_ 11. Sunglasses should be worn by welders' helpers to protect their eyes from UV radiation.
- \_\_\_\_\_ 12. Prescription glasses with plastic lenses are OK to use in the shop.
- \_\_\_\_\_ 13. Painting, steam or solvent cleaning, and battery servicing requires at least safety glasses or safety goggles.
- \_\_\_\_\_ 14. The best material for safety lenses is tempered glass.
- \_\_\_\_\_ 15. 90% of all eye injuries are preventable.
- \_\_\_\_\_ 16. Contact lenses should not be thought to have any eye protection value.
- \_\_\_\_\_ 17. Carelessness is the major cause of any accident.



- \_\_\_\_ 18. Eye safety measures can be used in other activities such as around the house or yard and in sports.
- \_\_\_\_ 19. Common sense is not related to eye safety.
- \_\_\_\_ 20. Impaired vision or blindness can easily be the consequence of an eye injury.

### Multiple Choice

Place the letter representing the best answer in the space provided.

- \_\_\_\_ 21. Safety glasses or goggles should always be worn when  
A. you are operating machinery      C. both A and B  
B. any person is working in the shop
- \_\_\_\_ 22. When working with chemicals which of the following can be used for EYE and FACE protection?  
A. safety glasses      C. safety glasses for eye protection and face shield for face protection  
B. face shield      D. none of the above
- \_\_\_\_ 23. Which industrial operations require eye protection?  
A. cutting material      D. explosion and fire hazards  
B. molten metal operations      E. all the above  
C. chemical handling
- \_\_\_\_ 24. Which of the following is necessary for an effective first aid response?  
A. speed & knowledge      C. directions to the hospital  
B. notifying next of kin      D. school insurance coverage
- \_\_\_\_ 25. Streetwear glasses cannot be worn in industrial environments because they don't have  
A. side shields      C. industrial safety frames  
B. industrial strength impact resistant lenses      D. all the above