

## DESCRIPTION

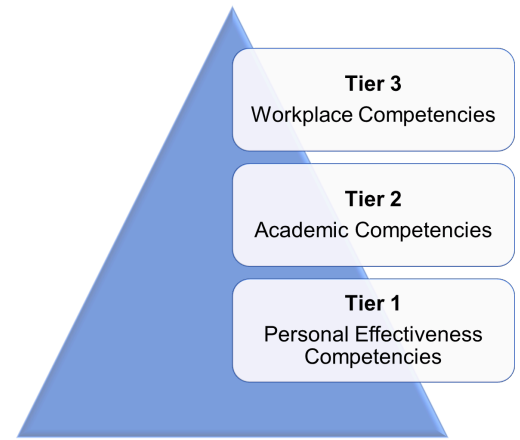
Learning competencies are the skills and knowledge that students must master to achieve learning goals in the Chicago Builds program.

Competencies are aligned to the [commercial and industrial construction competency model](#) of the US Department of Labor.

[Tier 1 - Personal Effectiveness](#)

[Tier 2 - Academic](#)

[Tier 3 - Workplace](#)



## Tier 1 – Personal Effectiveness Competencies

*Often referred to as "soft skills," personal effectiveness competencies are generally learned in the home or community and reinforced and honed at school and in the workplace. They represent personal attributes that may present some challenges to teach or assess.*

**Interpersonal Skills:** *Display skills to work with others from a range of backgrounds.*

- Respect the opinions, customs, and individual differences of others
- Interact respectfully with trainees of different cultures, genders, and backgrounds
- Work cooperatively with others on the job and display a good-natured attitude
- Resolve conflicts and differences to maintain a smooth workflow

**Integrity:** *Display accepted social and work behaviors.*

- Apply ethical standards of the industry to workplace/jobsite conduct
- Treat others with honesty, fairness, and respect
- Take responsibility for accomplishing work goals within accepted timeframes
- Accept responsibility for one's decisions and actions

**Professionalism:** *Maintain a professional demeanor.*

- Take pride in one's work and the work of the organization
- Demonstrate capability to have self-control and healthy emotional regulation
- Accept criticism and deal calmly with stressful situations
- Dress appropriately for the workplace/jobsite
- Maintain appropriate personal hygiene
- Refrain from substance abuse

**Initiative:** *Demonstrate a willingness to work.*

- Pursue work with energy, drive, and effort to accomplish tasks
- Persist at a task or problem despite interruptions, obstacles, or setbacks
- Work independently and perform effectively even with little or no supervision
- Take initiative to seek out new responsibilities
- Establish and maintain challenging, but realistic, work goals

**Dependability and Reliability:** *Display responsible behaviors*

- Arrive at work fit and on time each day

- Avoid absenteeism
- Work accurately and quickly under pressure
- Complete assignments and meet deadlines
- Comply with rules, policies, and procedures such as safety, personal hygiene, personal discipline, substance abuse, employee theft, and sexual harassment

## Tier 2 – Academic Competencies

*Academic competencies are critical competencies primarily learned in a school setting. They include cognitive functions and thinking styles. Academic competencies are likely to apply to all industries and occupations.*

**Reading:** *Understand written sentences and paragraphs in work-related documents.*

- Read and understand technical and workplace documents such as contracts, regulations, manuals, reports, memos, forms, graphs, charts, tables, calendars, schedules, signs, and notices
- Read and understand operating directions, installation instructions, and standard operating procedures
- Recognize the meaning of specialized words or phrases unique to the industry
- Apply what is learned from written material to follow instructions and complete tasks

**Writing:** *Use standard English to compile information and prepare written documents.*

- *Organization and development*
  - Communicate ideas, information, and messages, which may contain technical material, in a logical manner
  - Fill out forms, reports, records, logs, and documents to comply with project requirements
- *Mechanics*
  - Use standard syntax and sentence structure
  - Use correct spelling, punctuation, and capitalization
  - Use appropriate grammar (e.g., correct tense, subject-verb agreement, no missing words)
  - Use industry terminology, acronyms, and jargon appropriately

**Mathematics:** *Use principles of mathematics such as arithmetic, algebra, and geometry to solve problems.*

- *Computation*
  - Add, subtract, multiply, and divide with whole numbers, fractions, decimals, and percents
  - Calculate averages, ratios, proportions, and rates
  - Convert decimals to fractions; convert fractions to percents
- *Measurement*
  - Take measurements of structures, distance, length, width, height, perimeter, area, angles, weight, and temperature
  - Use and report measurements correctly
  - Convert common units of measurement (e.g., from English to metric)
  - Find level, plumb, and square
  - Read gauges and measurement instruments accurately
- *Application*
  - Choose the right mathematical method or formula to solve a problem
  - Perform math operations accurately to complete jobsite/workplace tasks
  - Use various formulas for calculating the amount of materials needed to complete a task
  - Calculate volumes of shapes and structures
  - Calculate dimensions from blueprints

**Science:** *Use scientific rules and methods to solve problems.*

- Understand scientific principles critical to the construction profession
- Understand physical principles such as forces, friction, and energy
- Understand and evaluate the characteristics and hazards of electricity
- Recognize and understand the interactions of compatible and incompatible substances

- Apply basic scientific principles and technology to solve problems and complete tasks

**Communication:** *Visual and Verbal: Listen, speak, and signal so others can understand. Communicate in spoken English well enough to be understood by others.*

- **Verbal:**
  - Speak clearly and succinctly to convey information correctly
  - Comprehend terminology spoken on training labs
  - Demonstrate knowledge of slang and jargon related to the different trades courses
  - Understand and respond to verbal messages and instructions
  - Ask questions or report problems or concerns to people in authority when information or procedures are unclear or need improvement, or when feeling unsafe or threatened in the workplace
- **Visual:**
  - Recognize universal signs and symbols such as colors, flags, and stakes to function safely in the workplace

**Basic Computer Skills:** *Use a computer and related applications to input, store, and retrieve information.*

- Use basic computer hardware (e.g., PCs, printers) and software (e.g., word processing software, spreadsheet software) to perform tasks
- Understand capabilities of computers and common computer terminology (e.g., program, operating system)

### Tier 3 – Workplace Competencies

*Workplace competencies represent motives and traits, as well as interpersonal and self-management styles. They generally are applicable to a large number of occupations and industries.*

- Understand the roles and responsibilities of the individual as part of a team and the hierarchy of individuals on the jobsite
- Perform responsibly as a team member and assist other members of the work team
- Effectively communicate with all members of the group or team to achieve team goals
- Effectively resolve conflicts with co-workers to maintain a smooth workflow
- Learn from other team members
- Assist others who have less experience or heavy workloads
- Following Directions: Receive, understand, and carry out assignments with minimal Supervision.
- Receive, interpret, understand, and respond to verbal messages and other cues
- Ask questions to clarify unclear directions
- Comprehend and follow steps used in instructions to complete assignments independently.

**Following Plans and Schedules:** *Receive, understand, and carry out assignments to follow the planned workflow sequence.*

- Establish specific goals to accomplish work in a timely manner
- Stay on schedule
- Provide updates on complete work, materials used, and materials needed for project completion

**Problem Solving and Decision Making:** *Apply critical-thinking skills to solve problems encountered on the work site.*

- **Identify the Problem**
  - Recognize the existence of a problem
  - Identify the nature of the problem and define critical issues
  - Locate, obtain, and review information relevant to the problem
- **Generate Alternatives**
  - Generate a variety of approaches to the problem
  - Think creatively to develop new ideas for and answers to work related problems
  - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions or approaches to problems
- **Choose and Implement a Solution**

- Use strategies, tools, resources, and equipment to implement the solution
- Observe and evaluate the outcomes of implementing the solution to assess the need for alternative approaches and to identify lessons learned

**Working with Tools and Technology:** *Select, use, and maintain tools and technology to facilitate work activity.*

- *Select and Use Tools and Technology*
  - Identify the hand and power tools appropriate to the work site and to the trade
  - Select tools, technology, machinery, and equipment appropriate for a given job
  - Demonstrate appropriate use of tools to complete work functions
  - Identify potential hazards related to the use of tools
  - Operate hand or power tools and equipment in accordance with established operating procedures and safety standards

**Craftsmanship:** *Recognize the responsibilities and personal characteristics of a professional craftsperson.*

- *Physical Aptitude*
  - Recognize the physical aptitudes necessary to perform critical work functions
  - Demonstrate manual dexterity, balance, and eye-hand coordination
  - Demonstrate sufficient stamina to complete critical work functions (e.g., walking or standing for extended periods of time, carrying heavy objects for extended periods, ability to lift 50 lbs.)

**Trade Knowledge**

- Perform quality work meeting or exceeding the standards of the industry
- Exert effort toward task mastery