CONSTRUCTION WORKER: APPRENTICESHIP PREPARATION MC3 (240 Hours) - Course No.:79-15-89

COMPETENCY CHECKLIST

Student Name _____

Teacher Name _____ School Site _____

Start Date _____ Completion Date _____ Certificate Date_____

Teacher Signature _____ Student Signature _____

(Signatures verify completion of course competencies)

A. ORIENTATION & CLASSROOM SAFETY (28 hrs)

_____ 1. Scope and purpose of course
_____ 2. Course content as part of Linked Learning
_____ 3. Classroom policies and procedures
_____ 4. Frequent test in class and life
_____ 5. Sexual and workplace harassment
_____ 6. General representation in industry
_____ 7. Diversity awareness in industry
_____ 8. Health and safety issues for women
_____ 9. First aid and emergency procedures
_____ 10. Different occupations in construction
_____ 11. Wages and application requirements
_____ 12. Future of construction
_____ 13. Explain financial literacy in construction
_____ 14. Working rules for class/worksite
_____ 15. Keeping a driver's license
_____ 16. Uses of Personal Protection Equipment
_____ 17. Concepts of OSHA
_____ 18. Describe safety data sheet
_____ 19. Importance of workplace soft skills
_____ 20. Pass safety exam with 100%

B. OSHA 10 CONSTRUCITON (10 hrs)

_____ 1. Describe OSHA's role
_____ 2. Employee's rights through OSHA
_____ 3. Employer's responsibilities
_____ 4. Describe Focus Four
_____ 5. Manage safety and health
_____ 6. Hazards on construction site
_____ 7. Personal protective equipment
_____ 8. Discuss health hazard awareness
_____ 9. Safety practices on stairways/ladders
____ 10. Fire protection and prevention
____ 11. Safety issues when excavation/shoring
_____ 17. Standard units of construction trades

C. FIRST AID/CPR/AED (8 hrs)

_____ 1. Type of medical emergency
_____ 2. Breathing and cardiac emergencies
_____ 3. Sustain life until aid arrives
_____ 4. Prevent disease transmission

D. HERITAGE OF AMERICAN WORKER (7 hrs)

_____ 1. Guild tradition
_____ 2. Building trades in 19th/20th centuries
_____ 3. Davis Bacon Act and prevailing wage
_____ 4. Fitzgerald Act and impact
_____ 5. Demographics in labor movement
_____ 6. Project labor and community agreements
____ 7. Labor/community workforce agreements

E. TRADE MATH & MEASURING TAPE (32 hrs)

_____ 1. Practical applications of math in construction
_____ 2. Solve whole number problems
_____ 3. Solve fraction problems
_____ 4. Solve decimal problems
_____ 5. Change fractions to decimals
_____ 6. Change decimals to fractions
_____ 7. English linear measurements
_____ 8. Usage of measuring tapes
_____ 9. Pass measuring tape test
_____ 10. Fractionalization of the inch
_____ 11. English system of measuring length
_____ 12. English system of measuring area
_____ 13. English system of measuring volume
_____ 14. English system linear units of measurements
_____ 15. Problem solving techniques

_____ 16. Basics on metric system
_____ 17. Standard units of construction trades
_____ 18. Review specific math sections
_____ 19. Pass math quizzes

F. APPRENTICESHIP PREPARATION (7 hrs)
_____ 1. Define apprenticeship
_____ 2. Apprenticeship employment issues & myths
_____ 3. Application process & criteria for entry
_____ 4. Training opportunities in apprenticeship
_____ 5. Qualification/requirement for various trades
_____ 6. Building trade organizations
_____ 7. Applicable trade knowledge, skills & abilities
_____ 8. Importance of attendance and punctuality
_____ 9. Apprenticeship trade analysis exercise
____ 10. Apprenticeship worker qualities
____ 11. Job duties for apprentices and journeymen
____ 12. Places training where training is available
____ 13. Union and non-union employment
____ 14. Visit at least 8 union training centers
____ 15. Apply to different trades
____ 16. Design sample resumes and cover letters
____ 17. Filling out and complete job application
____ 18. Common mistakes on job applications
____ 19. Complete job applications forms correctly
____ 20. Importance of enthusiasm on interview/job
____ 21. Appropriate appearance in interview/job

G. BASIC BLUEPRINT/ESTIMATING (15 hrs)
_____ 1. Review engineer and architecture scales
_____ 2. Blueprints to city building dept. for approval
_____ 3. Architectural and structural plans
_____ 4. ANSI a scale set of plans
_____ 5. Identify/define parts of set of plans
_____ 6. Part of plans trades will use
_____ 7. Cross reference various parts of plan
_____ 8. Importance of notes
_____ 9. Calculate and find dimensions on plans
_____ 10. Pass math test based on copy of plans
_____ 11. Pass test on details from plans
_____ 12. Draw set of plans from class structure

H. TYPICAL HAND TOOLS (3 hrs)
_____ 1. Identify and describe typical hand tools

I. COMON POWER TOOLS (3 hrs)
_____ 1. Identify and describe common power tools

J. BUILDING & GREEN CODES (7 hrs)
_____ 1. Explain ICC and IRC codes
_____ 2. ICC, IBC, IRC codes final authority
_____ 3. Green codes, LEED programs, State Title 24
_____ 4. OSHA/CAL-OSHA construction codes
_____ 5. Federal ADA Handicap Title 24 Disability Act
_____ 6. NEC, ICC-IPC, UPC, ICC-IMC, UMC Codes

K. MASONRY (3 hrs)
_____ 1. Cement industry, job description and pay
_____ 2. Masonry/concrete finishers union
_____ 3. History of concrete and masonry
_____ 4. Small block wall techniques
_____ 5. Small pour using different tools techniques
_____ 6. Concrete/masonry codes
_____ 7. Estimate costs in concrete industry
_____ 8. Codes and application of reinforcement
_____ 9. Explain finishing techniques
_____ 10. Review and test

L. BASIC FRAMING (3 hrs)
_____ 1. Framing industry, job description and pay
_____ 2. Carpenters union apprenticeship programs
_____ 3. History of wood framing and tools
_____ 4. Basic framing codes
_____ 5. Simple framing estimating
_____ 6. Small wood wall with partial roof assembly
_____ 7. Build small metal wall
_____ 8. Nails and framing hardware
_____ 9. Review and test

M. PLUMBING FUNDAMENTALS (3 hrs)
_____ 1. Plumbing industry, job description and pay
_____ 2. Plumbers/fitters/fire sprinkler basics
_____ 3. Four major plumbing sections
_____ 4. Threading a pipe technique
_____ 5. Seating a fitting using soft solder
_____ 6. Plumbing codes IPC/UPC basics
_____ 7. Review and test

N. ELECTRICAL & LIGHTING FUNDAMENTALS (3 hrs)
_____ 1. Electrical industry, job description and pay
_____ 2. Electrical union apprenticeship program
_____ 3. History of electrical usage and changes
_____ 4. Development of NEC
_____ 5. Writing an outlet, switch, light, 3 way setup
_____ 6. Safe use of electrical tools
_____ 7. Review and test

O. INTRO TO HEATING/VENTILATION/AIR CONDITIONING (3 hrs)

_____ 1. HVAC industry, job description and pay
_____ 2. HVAC union apprenticeship program
_____ 3. Refrigeration cycle
_____ 4. Heating and air conditioning history
_____ 5. Basics of job specific tools
_____ 6. Operating small window a/c unit
_____ 7. Components/parts of small window a/c unit
_____ 8. Cutting tube, flaring and hard soldering
_____ 9. Basic mechanical codes IMC/UMC
_____ 10. Review and test

P. DOORS, WINDOWS & FINISH CARPENTRY FUNDAMENTALS (3 hrs)

_____ 1. Trades that install doors, windows, trims, job description and pay
_____ 2. Apprenticeship programs and applications
_____ 3. Light (windows)/ventilation, ingress/egress
_____ 4. Title 24 energy code
_____ 5. Style of window and door types
_____ 6. How to install window and door
_____ 7. Review and test

Q. BASIC DRYWALL & STUCCO (3 hrs)

_____ 1. Drywall and plastering unions/trades
_____ 2. History and future of wall covering industry
_____ 3. Basic wall covering codes
_____ 4. Drywall, taping and finishing techniques
_____ 5. Importance of fire ratings
_____ 6. Waterproofing, wire netting, and 3 coats
_____ 7. Review and test

R. BEGINNING PAINTING: RESIDENTIAL, COMMERCIAL & INDUSTRIAL (3 hrs)

_____ 1. History of paint and industrial coatings
_____ 2. Careers, duties, pay scale of industry
_____ 3. Finishing trades apprenticeship programs
_____ 4. Purpose of surface preparation
_____ 5. Types of paints and coatings used
_____ 6. Trade tools and equipment
_____ 7. Material cost and labor of specific job
_____ 8. Painting with roller and airless sprayer
_____ 9. Review and test

S. BASIC ROOF COVERING & DESIGN (3 hrs)

_____ 1. History of roofing industry
_____ 2. Careers, duties, pay scale of industry
_____ 3. Roofer's apprenticeship programs
_____ 4. Torch down, asphalt shingled to shed roof
_____ 5. Finding and repairing holes
_____ 6. Material and labor estimates of industry
_____ 7. Sheet metal use in roofing
_____ 8. Review codes related to roofing
_____ 9. Review and test

T. INTRODUCTION TO FLOORING & TILING (3 hrs)

_____ 1. History of flooring and tiling industry
_____ 2. Careers, duties, pay scale of industry
_____ 3. Flooring and tiling apprenticeship programs
_____ 4. Tiling and flooring techniques
_____ 5. Justification and estimating cost
_____ 6. Review and test

U. JOB READINESS/SOFT SKILLS (10 hrs)

_____ 1. Current state of construction industry
_____ 2. Interview, application, resume, communication skills and professionalism

V. TRADE MATH & MEASURING TAPE (80 hrs*)

_____ 1. Whole numbers program solving techniques
_____ 2. Solve fraction problems
_____ 3. Solve decimal problems
_____ 4. Change fractions to decimals
_____ 6. Change decimals to fractions
_____ 6. English system measuring problems
_____ 7. Practice math job entry exams