

Carpentry 1 Course Syllabus

Module 1- Basic Safety (00101-04) Approximate Instructional Time: 15 Hours

Session I. Introduction to Accidents

- A. Accident Causes and Results
- B. Safety Policies and Regulations
- C. Reporting Accidents

Session II. Job-Site Hazards

- A. Construction Job-Site Hazards
- B. Working Safely with Job Hazards

Session III. Personal Protective Equipment and Lifting

- A. Personal Protective Equipment
- B. Lifting
- C. Performance Testing
 - a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Session IV. Aerial Work

- A. Ladders and Scaffolds
- B. Scaffolds

Session V. Hazard Communication and Fire Safety

- A. Hazard Communication Standard
- B. Fire Safety

Session VI. Electrical Safety, Review, and Module Examination

- A. Basic Electrical Safety Guidelines
- B. Working Near Energized Electrical Equipment
- C. If Someone Is Shocked
- D. Review
- E. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Module 2- Construction Math (00102-04)

Approximate Instructional Time: 15 Hours

Session I. Whole Numbers

- A. Parts of a Whole Number
- B. Adding and Subtracting Whole Numbers
- C. Multiplying and Dividing Whole Numbers
- D. Using the Calculator

Session II. Measurements and Fractions

- A. Working with Measurements
- B. Finding Equivalent Fractions and Reducing Fractions
- C. Comparing Fractions and Finding the Lowest Common Denominator
- D. Adding and Subtracting Fractions
- E. Multiplying and Dividing Fractions

Session III. Decimals

- A. Reading a Machinist's Rule
- B. Comparing Whole Numbers and Decimals
- C. Comparing Decimals with Decimals
- D. Adding and Subtracting Decimals
- E. Multiplying and Dividing Decimals
- F. Rounding Decimals
- G. Using a Calculator

Session IV. Conversion Processes

- A. Converting Decimals to Percentages and Percentages to Decimals
- B. Converting Fractions to Decimals
- C. Converting Decimals to Fractions
- D. Converting Inches to Decimal Equivalents in Feet

Session V. Introduction to the Metric System

- A. Units of Weight, Length, Volume, and Temperature
- B. Using a Metric Ruler
- C. Converting Measurements

Session VI. Introduction to Construction Geometry

- A. Angles
- B. Shapes
- C. Area of Shapes

- D. Volume of Shapes
- E. Review
- F. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Module 3-Hand Tools (00103-04)

Approximate Instructional Time: 10 Hours

Session I. Hand Tools, Part One

- A. Hammers
- B. Screwdrivers
- C. Sledgehammers
- D. Ripping Bars and Nail Pullers
- E. Pliers and Wire Cutters

Session II. Hand Tools, Part Two

- A. Rulers and Other Measuring Tools
- B. Levels
- C. Squares
- D. Plumb Bob
- E. Chalk Lines
- F. Bench Vises

Session III. Hand Tools, Part Three

- A. Clamps
- B. Saws
- C. Files and Rasps
- D. Chisels and Punches
- E. Wrenches
- F. Performance Testing (Tasks 1&2)

Session IV. Hand Tools, Part Four

- A. Sockets and Ratchets
- B. Torque Wrenches
- C. Wedges
- D. Utility Knives
- E. Chain Falls and Come-Alongs
- F. Wire Brushes
- G. Shovels
- H. Review
- I. Module Examination

- a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.
- J. Performance Testing (Task 3)
- a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Module 4-Power Tools (00104-04)

Approximate Instructional Time: 5 Hours

Session I. Power Tools, Part One

- A. Introduction to Electric, Pneumatic, and Hydraulic Tools
- B. Power Drills
- C. Saws
- D. Performance Testing (Tasks 1&2)

Session II. Power Tools, Part two

- A. Grinders and Sanders
- B. Miscellaneous Power Tools
- C. Review
- D. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.
- E. Performance Testing (Tasks 3 through 5)
 - a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Module 5-Blueprints (00105-04)

Approximate Instructional Time: 7.5 Hours

Session I. Introduction to Blueprints, Part One

- A. Plans
- B. Specification
- C. Requests for Information

Session II. Introduction to Blueprints, Part Two

- A. Components of the Blueprint

- B. Scale
- C. Lines of Construction

Session III. Introduction to Blueprints, Part three

- A. Abbreviations, Symbols, and Keynotes
- B. Using Gridlines to Identify Plan Locations
- C. Dimension
- D. Review
- E. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.
- F. Performance Testing
 - a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be use to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Module 6-Basic Rigging (00106-04)

Approximate Instructional Time: 20 Hours

Session I. Slings, Part One

- A. Introduction
- B. Synthetic Slings

Session II. Slings, Part Two

- A. Alloy Steel Chain Slings
- B. Wire Rope Slings
- C. Performance Testing (Task 1)

Session III. Hitches

- A. Vertical Hitch
- B. Choker Hitch
- C. Basket Hitch
- D. Performance Testing (Task 2)

Session IV. Rigging Hardware, Part One

- A. Shackles
- B. Eyebolts

Session V. Rigging Hardware, Part Two

- A. Lifting Clamps
- B. Rigging Hooks
- C. Performance Testing (Task 3)

Session VI. Sling Stress and Hoists

- A. Sling Stress
- B. Chain Hoists

Session VII. Rigging Operations and Practice, Part One

- A. Rated Capacity
- B. Sling Attachment
- C. Hardware Attachment
- D. Performance Testing (Task 4)

Session VIII. Rigging Operations and Practice, Part Two

- A. Load Control
- B. ANSI Hand Signals
- C. Review
- D. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on the Craft Training Report Form 200, and submit the results to the Training Program Sponsor.
- E. Performance Testing (Tasks 5 through 8)
 - a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

Module 7- Communication Skills (00107-04)

Approximate Instructional Time: 5 Hours

Session I. Reading and Writing Skills

- A. Reading on the Job
- B. Writing on the Job
- C. Performance Testing (Tasks 1 through 3)

Session II. Listening and Speaking Skills

- A. Active Listening on the Job
- B. Speaking on the Job
- C. Review
- D. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.

- b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.
- E. Performance Testing (Task 4)
 - a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit to the Training Program Sponsor.

Module 8- Employability Skills (00108-04)

Approximate Instructional Time: 15 Hours

Session I. The Construction Business

- A. Entering the Construction Workforce
- B. Entrepreneurship
- C. Performance Testing (Task 1)

Session II. Critical Thinking Skills

- A. Barriers to Problem Solving
- B. Solving Problems Using Critical Thinking Skills
- C. Problems with Planning and Scheduling

Session III. Computer Skills

- A. Computer Terms
- B. Basic Software Packages
- C. Electronic Mail (Email)
- D. Computers in the Construction Industry
- E. Performance Testing(Task 2)

Session IV. Relationship Skills, Part One

- A. Self-Presentation Skills
- B. Conflict Resolution
- C. Giving and Receiving Criticism

Session V. Relationship Skills, Part Two

- A. Teamwork Skills
- B. Leadership Skills
- C. Performance Testing (Task 3)

Session VI. Workplace Issues

- A. Harassment
- B. Stress and Drug and Alcohol Abuse

- C. Review
- D. Module Examination
 - a. Trainees must score 70% or higher to receive recognition from NCCER.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.
- E. Performance Testing
 - a. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
 - b. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.