

COURSE OUTLINE**Course:** 19999 CONSTRUCTION CAREERS**Total Course Hours:** 360.00**CBEDS Title:** CONSTRUCTION CAREERS**CBEDS #:** 1999**Job Title(s):**

Cabinet Installer, Plumber, Air Conditioning and Heating Repair Technician, Electrician, Project Manager, Framing, Laborer

Prerequisites:

None

Course Description:

This course will allow students to familiarize themselves with the various aspects of each construction trade. This cursory exposure will serve as a good venue to gauge a student's degree of interest in the construction field and provide them with options to choose a specific direction they want to pursue. Students will be introduced to basic tools and equipment, construction designs, blueprints and estimating, foundations, framing, roofing, exterior siding and trim, windows, doors and skylights, plumbing, heating and air conditioning, electrical wiring, insulation, interior finish, floor coverings, cabinetry and finish work. Integrated throughout the course are Academic and CTE standards, which include safety, communication, technology, ethics, career planning and other employability skills.

| Hours | |
|-------|-----|
| Class | OJT |

Occupational Competencies

1-7 on the Course Outline are generic to all BVROP courses and include the BVROP Student Outcomes

| | | | | |
|-------|-------|---|---|--|
| 3.00 | 3.00 | 1 | <u>ORIENTATION</u> | <ul style="list-style-type: none"> A Identifies and discusses course objectives and competencies. B Discusses ROP Student Outcomes. C Explains class attendance and behavior objectives. |
| 3.00 | 3.00 | 2 | <u>HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT</u> | <ul style="list-style-type: none"> A Describes accident procedure. B Demonstrates appropriate safety practices (e.g. bending, lifting, etc.). C Demonstrates knowledge of classroom procedures and drills (e.g. earthquake, fire and emergency). |
| 3.00 | 3.00 | 3 | <u>ETHICS AND LEGAL RESPONSIBILITIES</u> | <ul style="list-style-type: none"> A Defines sexual harassment and discusses tactics for handling harassment situations. B Applies appropriate workplace behavior and standards. |
| 3.00 | 3.00 | 4 | <u>LEADERSHIP AND TEAMWORK</u> | <ul style="list-style-type: none"> A Describes the characteristics and benefits of teamwork and leadership. B Demonstrates ability to make appropriate decisions. C Works well with others and gives/takes constructive criticism. |
| 15.00 | 15.00 | 5 | <u>CAREER PLANNING</u> | <ul style="list-style-type: none"> A Prepares a finished, professional portfolio showing the best work that has been completed during the class. B Locates job opportunities through the use of want-ads and placement agencies. C Visits at least one facility related to area of training and observes jobs performed. D Completes a job application correctly. E Prepares for and critiques a simulated employment interview. F Discusses employee benefits and rights as related to the specific occupational job area including gender equity and equal opportunity. G Identifies acceptable procedures to leave a job. H Applies for a scholarship. I Completes a professional resume. J Demonstrates appropriate personal grooming and dress. |

| | |
|-------|-----|
| Hours | |
| Class | OJT |

- | | | | | |
|-------|-------|-----------|--|--|
| 3.00 | 3.00 | 6 | <u>COMMUNICATION</u> | <ul style="list-style-type: none"> A Uses effective workplace conversation. B Reads and interprets written information and directions. C Practices various forms of written communication appropriate to the occupation. |
| 5.00 | 5.00 | 7 | <u>STUDENT OUTCOMES</u> | <ul style="list-style-type: none"> A Demonstrates Occupational Specific, Communication and Critical Thinking Skills B Demonstrates Responsible Work Ethics C Demonstrates Career/Employment Literacy D Demonstrates Effective Use of Technology |
| 5.00 | 5.00 | 8 | <u>ORIENTATION AND SAFETY PRACTICES</u> | <ul style="list-style-type: none"> A Describes job site condition versus safety factor B Recognition of site hazards (i.e. lead paint, asbestos, unsafe conditions) C List of general safety practices to use in all areas of construction |
| 10.00 | 10.00 | 9 | <u>TOOLS AND EQUIPMENT</u> | <ul style="list-style-type: none"> A Demonstrates the range of hand and power tools and the complete selection for the job B Describes the need for tool maintenance and usage C Identifies safety procedures for use of all tools |
| 10.00 | 10.00 | 10 | <u>CONSTRUCTION DESIGN</u> | <ul style="list-style-type: none"> A Identifies the stages of design-concept, schematic and working drawings B Demonstrates the use of CAD system C Prepares a simple floor plan using CAD |
| 10.00 | 10.00 | 11 | <u>BLUEPRINT AND ESTIMATING</u> | <ul style="list-style-type: none"> A Describes the elements of a set of blueprints B Identifies the symbols and layout of scale vs. size C Completes a residential "takeoff" of materials for a sample project D Uses a cost estimation book and prepare a bid for the project E Demonstrates ability to multiply and calculate square footages F Discusses and reviews legal implications of bids |
| 10.00 | 10.00 | 12 | <u>FOUNDATION</u> | <ul style="list-style-type: none"> A Refines differences between slab and raised foundation footing B Reviews and demonstrates foundation layout and forming C Digs and places rebar into footing/pours concrete |
| 10.00 | 10.00 | 13 | <u>FRAMING</u> | <ul style="list-style-type: none"> A Uses blueprints, demonstrates a wall layout B Prepares a lumber list and selects materials C Completes a wall framed with wood and steel straps D Discusses post and beam construction load |
| 10.00 | 10.00 | 14 | <u>ROOFING</u> | <ul style="list-style-type: none"> A Reviews and discusses different types and applications of roofing materials B Demonstrates safety aspects of roof work C Discusses and frames different types of roofing systems D Reviews weatherproofing aspects of roofing |
| 5.00 | 5.00 | 15 | <u>EXTERIOR SIDING AND TRIM</u> | <ul style="list-style-type: none"> A Describes stucco vs. wood siding B Discusses flashing and trim C Installs sample stucco/siding to model |

| | |
|-------|-----|
| Hours | |
| Class | OJT |

- | | | |
|-------|-------|---|
| 10.00 | 10.00 | 16 <u>WINDOWS, DOORS AND SKYLIGHTS</u> |
|-------|-------|---|
- A Describes the energy factor in windows and skylights
 - B Applies weatherproof elements to window
 - C Discusses different types of windows

- | | | |
|-------|-------|---------------------------|
| 10.00 | 10.00 | 17 <u>PLUMBING</u> |
|-------|-------|---------------------------|
- A Identifies the major components of supply and waste systems
 - B Demonstrates use of copper plumbing and ABS
 - C Describes the new plumbing systems being used

- | | | |
|-------|-------|---|
| 10.00 | 10.00 | 18 <u>HEATING AND AIR CONDITIONING</u> |
|-------|-------|---|
- A Describes furnace and condense
 - B Reviews the basics of HVAC components

- | | | |
|-------|-------|------------------------------------|
| 10.00 | 10.00 | 19 <u>ELECTRICAL WIRING</u> |
|-------|-------|------------------------------------|
- A Describes the service panel
 - B Identifies safety issues related to electrical
 - C Wires a sample circuit and switches

- | | | |
|------|------|-----------------------------|
| 5.00 | 5.00 | 20 <u>INSULATION</u> |
|------|------|-----------------------------|
- A Calculates "R" values and principles related to insulation
 - B Explains the different types of insulation

- | | | |
|-------|-------|--|
| 10.00 | 10.00 | 21 <u>INTERIOR FINISH - WALLS AND CEILING</u> |
|-------|-------|--|
- A Demonstrates drywalls installation and taping
 - B Identifies types of drywall and demonstration of proportions of sand
 - C Identifies paint types and demonstration of their applications

- | | | |
|-------|-------|----------------------------------|
| 10.00 | 10.00 | 22 <u>FLOOR COVERINGS</u> |
|-------|-------|----------------------------------|
- A Demonstrates principles of sub flooring
 - B Demonstrates hardwood flooring installation (engineered vs. custom installed)
 - C Identifies wall to wall carpet and vinyl flooring

- | | | |
|-------|-------|---|
| 10.00 | 10.00 | 23 <u>CABINETS AND FINISH WORK</u> |
|-------|-------|---|
- A Demonstrates custom millwork and installation
 - B Reviews cabinet types and differences
 - C Discusses finishes-stained, painted or special

TOTAL HOURS

| Class | OJT | Course |
|--------|--------|--------|
| 180.00 | 180.00 | 360.00 |