

Building and Property Maintenance Syllabus
Mr. Cotton - Instructor
2011/2012

Course Description

Building Trades is a two-year program, teaching the students the basics of construction, the use of hand tools, shop and job site safety, power tools and the fundamentals of masonry, carpentry, their junior year, then; plumbing and electricity their senior year.

Instructional Philosophy

Students will be taught theory in the classroom and get practical hands on experience in the Building Trades lab. Safety will be taught first and given the highest priority while working with hand and power tools. Students will work individually and as a team in the classroom and on lab projects. Assessment methods will include chapter tests, performance tests, a notebook, a journal, and a daily performance evaluation which grades the students according to; preparation, quality of work, time-use, co-operation, teamwork and safety.

OSHA

Teaching students to work safely is more important than teaching any skill in any program. The TCTC has made passing the 10 Hour OSHA safety course a requirement for successful completion of this program. This nationally recognized certificate will go into the student's portfolio upon completion, and because safety is so important to employers these days, it gives our students an important advantage when applying for a job. The \$18 nominal fee (\$275 if taken after graduation) is part of the program fees and may be re-assessed if the student fails to complete the initial test successfully. Students will not receive their State Certificates of Program Completion if they do not successfully complete this test.

Course Goals

1. **Academics-** for every student to do well in his! her academic classes including but not limited to government, communications, math and science. Students are encouraged to have at least one year of algebra, which is required by most apprenticeship programs.
2. **Leadership-** to find and develop leadership potential through daily rotating duties in the lab.
3. **Job skills-** students will have the necessary skills to find and hold an entry-level position in the area of construction area that interests them the most.
4. **Continuing Education-** that each student that desires further education will be able to make informed choices about the type and amount of continuing education needed.
5. **Safety-** that each student learns and practices safe work and lab habits.
6. **Attitude-** those students maintain a positive attitude, not only in school, but also in all that they do.
7. **Job Placement-** Place as many students in construction field jobs as possible.
8. **Program Improvement-** which the program will evaluate and improve with advisory committee's suggestion each year.

Course Topics- Junior Year

- Basic shop safety(OSHA Test) 100% pass rate
- Construction math (tape measure, and Pythagorean theorem)
- Introduction to: hand tools
 - Power tools
 - Blueprints (architect scale)
- Masonry: Introduction to brick and block
 - Masonry tools
 - Masonry layouts (square, plumb, level)
 - Transit

- **Carpentry:** Wall layouts
 - Door and window charts
 - Floor joist, sub-floors
 - Plywood application
 - Rafter and dormer layouts
 - Roofing layouts (step method, 3 0-36 method, and weaved valleys)
 - Valley flashing, chimney flashing: step, and counter flashing
 - Shop stationary tools

Senior-year

- **Electricity:** Blueprint Reading & sketching, Residential wiring
 - National Electric Code
 - Symbols
 - Switches, outlets, lights
 - Grounding
 - Boxes and fittings
 - Installation of electrical services
 - Circuit breakers and fuses
 - Lighting fixtures and fans

- **Plumbing:** Torch safety, Cleaning fittings
 - Soldering techniques, Nomenclature of fittings
 - Water tests, Sinks and water closets
 - Hot water tanks
 - Drainage, Waste, and Vent systems
 - Plumbing code

Evaluation Criteria

- Attendance(A student can not miss more than 18 days in lab&court,medicals,funerals all count against lab certification.)
- Daily lab performance & projects are required 20pts. + project pts.
- Chapter tests(NCCER requires 70% or better.)
- Notebook (lab projects and class notes) 20pts. / week
- Journal writing (learn to keep track of daily activities)
- Estimating (learn how to figure a bill of material)

Grading Scale

33% of the grade will be based on attendance(* 18days/yr,36 total) and daily lab performance.

33% of the grade will be based on the chapter tests, notebook, and journal writings.

33% will be on the lab projects and completed on time.

The grading scale is according to the Trumbull Career & Technical Center school policy.