

Limestone Community High School



Wood Machines & Methods



SYLLABUS

2010-2011

Instructor: Mr. Chandler

Classroom: 57

Planning Period: 5th

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A. Course Information

Grade Level: 10-12

Prerequisite(s): None

Length of Course: 1 semester

B. Course Description

Wood Machines and Methods is a one-semester course designed to orient students with the safe operation of power woodworking machines and tools used to process materials to produce a product. The students will be exposed to many experiences in woodworking area involving work with tools, machines, 23 joint techniques, basic cabinet construction, preparing wood for a finish, and different finishing techniques. Problem solving will be stressed. A materials fee will be assessed to each student.

C. Course Standards

Math Standards

Standard 1: The student will apply basic theorems of plane geometry, right triangle trigonometry, coordinate geometry and a variety of visualization tools to solve real-world and mathematical problems.

Standard 2: Recognize equivalent fractions and fractions in lowest terms

Standard 3: Solve routine one-step arithmetic problems (using whole numbers, fractions, and decimals) such as single step percent. Solve some routine two-step arithmetic problems.

Standard 4: Exhibit knowledge of elementary number concepts including rounding, the ordering of decimals, pattern identification, absolute value, primes, and greatest common factor.

Academic Language Arts Standards

Standard 1: The student will read and understand grade-appropriate English language text and apply a variety of strategies to expand vocabulary.

Standard 2: The student will understand the meaning of informational, expository or persuasive texts, using a variety of strategies and will demonstrate literal, interpretive, inferential and evaluative comprehension.

Standard 3: The student will locate and use information in reference materials.

D. Course Benchmarks/Objectives/Goals/Topics

1. operate, maintain, and adjust many woodworking machines safely.
2. plan, organize, and produce a finished product.
3. perform industrial operations with a safety conscience attitude.
4. demonstrate and apply problem-solving skills.
5. plan a sequence of work operations.
6. identify hardwoods, softwoods, and other materials used in the woodworking industry.
7. identify and construct different furniture and cabinetmaking joints and their uses.
8. identify types of adhesives, gluing, and clamping techniques and procedures.
9. clean and maintain work areas, leaving it in a safe condition.

10. identify and apply mathematics and geometry techniques to solve construction problems.
11. apply a finish using different finishing techniques.
12. identify careers and occupations that can be acquired in the woodworking industry.
13. identify abrasives and sanding techniques and procedures.
14. prepare a product for a complete finish
15. draw plans, make cut list and calculate cost of product.
16. identify and describe different types of woods fasteners, such as nails, screws, and pneumatic nailers.
17. identify different types of plywoods, hardboards, and veneers.

E. Text and Required Supplies

Textbook: Modern Woodworking

Workbook:

Supplies:

Supplemental Material:

F. Nine-Weeks Term Grading Plan

Participation: 30%

Tests/quizzes/homework/writing assignment: 20%

Projects: 30%

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Term Assessments: 20%

G. Semester Grading Plan

Term 1: 50%

Term 2: 50%

H. Limestone High School Grading Scale

A: 94-100

B: 86-93

C: 77-85

D: 70-76

I. Expectations

1. No passes.
2. No electronic devices.
3. No food or beverage.
4. Tardies are unacceptable.

J. Tentative Schedule

- I. Selecting and identifying materials
 - a. Hardwood vs. Softwood
 - b. Material grading
 - c. Defects
 - d. Engineered materials
 - e. Wood technology
- II. Measurement and layout
 - a. Ruler reading
 - b. Working with fractions
 - c. Board feet
 - d. Metric
 - e. Rough-out
- III. Tools and woodworking machines
 - a. Planing and sawing machines

- b. Drilling and boring
 - c. Band saw, scroll saw, and saber saw
 - d. Drill press
 - e. Router
 - f. Sanding machines
 - g. Tool selection and care
- IV. Safety
- a. General safety
 - b. OSHA
 - c. Machine demo
 - d. Safety test

- V. Assembly techniques
- a. Wood joints
 - b. Glues, gluing, and clamping
 - c. Mechanical fasteners

- VI. Project planning
- a. Sketching and designing
 - b. Plan Of Procedure (P.O.P)
 - c. Bill of Materials (B.O.M)

- VII. Begin projects (in no particular order)
- a. Shaker bench
 - b. Basic bookcase
 - c. Birdhouse
- VIII. Finishing
- a. Sanding and prep
 - b. Finishes and finishing

K. Other