

# Limestone Community High School



## Wood Production Technology



### SYLLABUS 2010-2011

**Instructor:** Mr. Chandler

**Classroom:** 57

**Planning Period:** 5<sup>th</sup>

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#### A. Course Information

**Grade Level:** 10-12

**Prerequisite(s):** Wood Machines & Methods

**Length of Course:** 1 semester

#### B. Course Description

Wood Production Technology is a one-semester course designed to orient students to develop an appreciation for the technologies involved in many aspects of production. A better understanding of the problem-solving, decision-making, and technical expertise involved in production to help the student become technologically literate will be stressed. It involves the research and development, production planning and tooling, quality control, management, manufacturing, and marketing components of industries which provides goods and services for people. Students will construct a custom project. As a team, the students will also organize a company. The company will design and mass-produce a product. The will elect officers, keep records of all work, and set up assembly lines. 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. provide advantages and disadvantages of manufacturing systems..
2. explain the advantages and disadvantages of custom vs. mass production.
3. develop problem-solving and creative abilities through production research, and development.
4. become aware of career opportunities in manufacturing.
5. explain the steps used in managing: gathering information, considering alternatives and formulating

goals.

6. design and construct mock-ups and prototypes.
7. discuss material processing innovations which are improving the efficiency, cost, and speed of manufacturing.
8. perform steps involved in research and development: identifying the problem, gathering information, designing, selecting the product and specifying the product.
9. research to identify consumer needs.
10. engage in pre-production activities such as plant layout, preparing to build, building a project, making jigs and fixtures, etc.
11. identify and utilize material handling systems.
12. simulate production technology through planned and controlled manufacturing activities.
13. become aware of problems and solutions encountered throughout production systems operations and suggest innovative techniques for the future.
14. discuss uses of marketing for information, educating, and persuading consumers.
15. discuss good packaging that enhances the product.

#### **E. Text and Required Supplies**

**Textbook:** Advanced Woodwork and Furniture Making

**Workbook:**

**Supplies:**

**Supplemental Material:**

#### **F. Nine-Weeks Term Grading Plan**

Participation:	30%
Tests/quizzes/homework/writing assignment:	20%
Projects:	30%
:	
:	
:	
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.
5. Safety glasses are required everyday that we are in the shop

#### **J. Tentative Schedule**

- I. Safety
  - a. General shop safety and machine safety
- II. Measurement/Board feet/Bill Of Materials
- III. Introduction to manufacturing and mass production
  - a. History
  - b. Principles of manufacturing
  - c. Innovations

d. Modern manufacturing

IV. Batch Production

a. Small group project

V. Starting a company

a. Parts of a company

b. Group product development

c. Group product marketing

VI. Whole class assembly line

a. Each class will be assigned a project to mass produce and sell as part of a competition among the other sections of the class

VII. Automation

a. Robotics

b. ShopBot

i. Programming

ii. Tool set-up

iii. Generating tool path

c. ShopBot project

i. Each student will have an opportunity to make a sign on the ShopBot

VIII. Individual Project

**K. Other**