

Blackhawk School District

CURRICULUM

Course Title:	Wood Material Processing
Course Number:	1041
Grade Level(s):	9-12
Periods Per Week:	5
Length of Course:	1 semester
Credits:	.5
Faculty Author(s):	Tim Linkenheimer
Date:	January 2010

COURSE DESCRIPTION:

This course is designed for students wanting to develop skills using a variety machines basic to the wood manufacturing industry. Students will have an opportunity to work with a variety of woods and understand how they are used in the manufacturing industry. Wood Material Processing is designed to offer a generic and broad view of the way humans change raw wood materials into a finished product(s). The students will see the significance of resources, processes, and impacts of wood materials used by mankind. The emphasis of this course is placed on the processes by which products (or projects) are developed. Some of the projects that students will make in this course include a board game, video game/DVD shelf and a mirror. **Wood Material Processing qualifies as a prerequisite for Engineering Materials & Product Design (1022).**

COURSE OUTLINE	OBJECTIVES (PA standard)	PROPOSED TIME / ACTUAL TIME	RESOURCES	LESSON REFLECTION (for future revisions)
1. Class Orientation	3.4.12.A3.	2 days	Syllabus	
2. Introduction to Technology	Demonstrate how technological progress promotes the advancement of science, technology, engineering and mathematics (STEM).	3 days	Instructor Designed Power Point	
3. Measuring	3.4.10.B1. Compare and contrast how the use of technology involves weighing the trade-offs between the positive and negative effects.	2 days	Instructor Designed Handouts, Worksheets & Quizzes	
4. Board Feet Calculations	3.4.10.B2. Demonstrate how humans devise technologies to reduce the negative consequences of other technologies.	3 days	Wood Textbook	
5. Safety Illustration Activity	3.4.10.C1. Apply the components of the technological design process.	5 days	Computer Lab Facility, Microsoft Office (School Fusion)	
6. Machine Safety	3.4.12.C3. Apply the concept that many technological problems require a multi-disciplinary approach.	10 days	PA Technology Education Safety Guide	
7. Wood Stock Squaring Activity	3.4.10.D2. Diagnose a malfunctioning system and use tools, materials, and knowledge to repair it.	2 days	Instructor Designed Handouts, Worksheets & Quizzes	

<p>8. Tic-Tac-Toe Board Project</p>		<p>15 days</p>	<p><u>Materials:</u> Ash (Wood) Screws Marbles Sandpaper Stain Polyurethane</p> <p><u>Machines:</u> Radial Arm Saw Table Saw Jointer Planer Compound Miter Saw Drill Press Vertical Milling Machine Cordless Drill</p>	
<p>9. DVD/Video Game Shelf Project</p>		<p>17 days</p>	<p><u>Materials:</u> Sassafras (Wood) Screws Sandpaper Stain Polyurethane</p> <p><u>Machines:</u> Radial Arm Saw Table Saw Jointer Planer Compound Miter Saw Cordless Drill Band Saw</p>	

<p>10. Miter Framed Mirror Project</p>		<p>10 Days</p>	<p><u>Materials:</u> Sassafras (Wood) Staples Mirrored Plastic Sandpaper Stain Polyurethane</p> <p><u>Machines:</u> Radial Arm Saw Table Saw Jointer Planer Compound Miter Saw Pneumatic Nail Gun Ribbon Bands Clamps</p>	
<p>11. Course Reading Activities</p>		<p>5 days</p>	<p>Wood Textbook and other resources</p>	
<p>12. Classroom Maintenance Activities</p>		<p>4 Days</p>	<p>Vacuums Pressurized Air Various Hand Tools</p>	

13. Comprehensive Final		2 days	Instructor Designed Study Guide & Final	
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