

TRENTON HIGH SCHOOL
2601 Charlton
Trenton, MI. 48183
734-692-4530

Course Name:	Furniture and Cabinetmaking
Course Number:	3730
Course Credit:	VPAA, 4 th year math related credit, Elective
School Year:	2008-2009
Instructor:	Robert Lindsay

Course Description:

This course provides entry – level and upgrade training in kitchen cabinet / furniture construction and provides students with a broad – based set of skills that is required by the wood products manufacturing industry and that is directly transferable to the manufacturing sector in general. Students are introduced to the valuable skills necessary for entry level employment or enter post-secondary wood programs. The program also includes state of the art cabinetmaking equipment where students will learn how to operate machines to perform the necessary tasks safely and efficiently, and with a high degree of quality. This course stresses safety as the number one requirement to proper machine operation. Safe operating conditions will be described. The student is provided with entry-level and upgrade training in cabinet and furniture construction skills for making traditional face frame and European (32 mm) cabinet systems. Special emphasis is placed on specifications of state of the art woodworking machinery, theory and lab machine safety.

Course Objectives:

Upon completion of the course students will have gained the skills needed for an entry level position in the woodworking industry or a excellent foundation skills to continue their post secondary education in a trade school, college or university.

Student Competencies:

Introduction to Class Organization, Procedures, Lab and Fire Safety
Students will be able to understand the design, planning, and estimation process.
Students will be able to understand and demonstrate safe practices.
Students will be able to understand and demonstrate the safe use of hand tools.
Students will be able to understand and demonstrate the safe use of portable power tools.
Students will be able to understand and demonstrate the safe use of power machines.
Students will be able to the wood components and characteristics.

Students will be able to understand the basic math and measuring concepts.
Students will be able to understand and demonstrate the use of fasteners / adhesives / abrasives.
Students will be able to understand and demonstrate the use of joinery.
Students will understand cabinet components / hardware.
Students will be able to understand and demonstrate finishing techniques.
Students will be able to understand the importance of employability and work habits.
Instill in students an understanding of career pathways they are in, job opportunities, and schools

Required Text:

Umstatted, William, and Davis Charles W. Modern Cabinetmaking. The Goodheart-Wilcox Company, INC., 2005.

References & Other Resources:

Feirer, John L, and Hutchings, Gilbert R. Advanced Woodwork and Furniture Making. Bennett Publishing Company, 1982.

Litchfield, Michael W. Renovation 3rd Edition. Taunton Press, 2005.

Katz, Gary. Installing and Hanging Doors. Taunton Press, 2002.

Course Advisory Committee:

Mike Young, Great Lakes Woodworking Company; Tony Gatliff, Great Lakes Woodworking Company; Brian Nixon, Woodwork Unlimited; Keith Malmstadt, Great Lake Woods, Inc.; Joe Leugers, JKL Machinery; Brian Brunt, Brunt Carpentry & Millwork Associates; Bill Miller, Parent Trenton Community; Jim Wellever, Michigan Career Technical Institute; Brenda Tomblin, Great Lakes Woodworking Company; Matt Parvin, Former Trenton High School Student; Dustin Warner, T.H.S. Student (Class of 2009); Rob Lindsay, T.H.S. Student (Class of 2009); Josh Haveranack, T.H.S. Student (Class of 2009)

Class Assignments:

The purpose of the Career Project is to get students thinking about which woodworking career they may be suited for, and then have them research thoroughly the dynamics of a career in the woodworking industry.

Final Exam:

Examinations: There will be one hands-on exam at the end of the trimester. This is worth 10% of the trimester grade. Exam dates will be announced at least three weeks before the exam to give the student sufficient time to complete the assignment.

Class Policies:

To the students of all woodworking and Cabinetmaking classes and the administrators who enforce the rules: the following is a list of rules discussed and enforced in the woodworking lab throughout the school year with the students. Safety rules are for the protection of the student(s) and the teacher.

1. A written safety exam must be passed before operating **any** power equipment.
2. Teacher permission has to be asked for and given before operation of **any** power equipment.
3. Long hair **will** be tied back.
4. Coats and jackets must not be worn in the lab area. Shirttails must be tucked in, and unbuttoned sleeves rolled up.
5. Safety glasses or goggles will be worn at **all** times in the lab area.
6. Report any injury to the teacher immediately, **no matter how small**.
7. No talking what so ever to others when operating power equipment. Complete concentration is necessary at all times.
8. No horseplay will **ever** be tolerated by any student. Especially the throwing of any tools, fasteners, etc.
9. Those students not working on a project or assigned job will then **sit in their assigned seat**.
10. Any solutions, water, oil etc. must be wiped from the floor **immediately** when spilled.
11. Report any equipment problems, breakdowns, etc. **immediately** to the teacher.
12. Removal of **any** guard is **absolutely prohibited** by any student.

It is sincerely hoped by this teacher that these safety rules are upheld by all persons involved. It is a terrible thing to see a person hurt when it could have been easily avoided by simply wearing safety glasses, tying your hair back, etc. Violators can be eliminated from this class for the violation of any of the above safety rules.

Evaluation & Grading:

50% -Class Project- This grade is determined by a point value given to the project before you start it. We will collaborate to establish this predetermined point value. Your class project grade is based on 1000 points. Therefore, you may build a project with a predetermined value of 500 points. You get a score of 400 on the project. As a result you will need to accumulate an additional 600 points to reach the 1000-point goal. Each project is graded by your ability and the criteria on the Project Performance Evaluation.

10% -Tests and Quizzes- through out the class you will be required to take a safety tests and quizzes.

10% -Homework Assignments- Throughout the semester you will have several homework assignments that will help emphasize what we discussed in class. *They are required to be handed in on the due date issued.*

10% -Class portfolio project or presentation- You will be required to create a *step-by-step* portfolio on how you created your project. This project is a way to professionally display the effort you put into your masterpiece!!!

20% -Attitude, Attendance, Effort, Participation, and Creativity

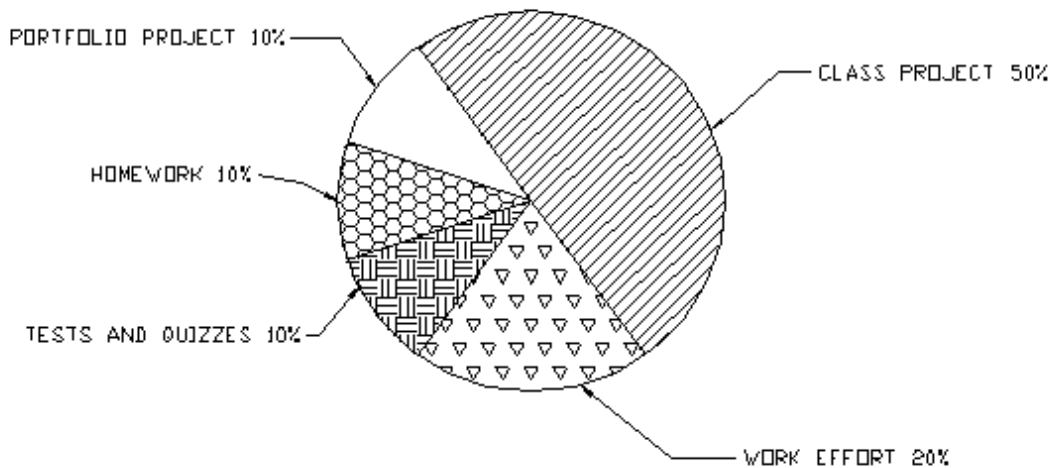
Attitude- Have a positive attitude, be supportive and help others to have a positive attitude also, show patience and respect others including your instructor, be courteous and aware of others feelings.

Attendance- Come to class!!!! Be on time!! Always!

Effort- Work hard, complete projects and try your very best at all times.

Participation- Voice opinions in class, ask questions when needed. Help others with enthusiasm.

Creativity- Try something new. Use creative problem solving methods.



Course Outline:

Projects: *Trenton Public schools provides all the necessary materials and supplies for curricular classes. Students who wish to supplement these materials may consider the following:* The kitchen cabinet with a drawer and drawer is the required project in this class where the district will provide all materials at no cost. The cabinet will be installed in the living skill kitchen. All students are required to make a kitchen cabinet to the exact specifications with a dovetailed drawer and raised panel door. The door and drawer must fit the opening with 100% accuracy. Any student that does not complete their assigned cabinet will not receive credit for the second trimester. No exceptions!

Requirements:

- A. Cabinet Construction. The specifications of the cabinet are:
 1. Drawer
 - a. The drawer sides must join the back with a rabbet and groove or dovetail joint.
 - b. The drawer sides must join the back with a dado joint or dovetail.
 - c. The bottom must set in a groove in the drawer front and the (2) sides and back.
 - d. The drawer must be guided by a center drawer guide or mechanical drawer slides.
 2. Door
 - a. The door may be either the flush or lid type manufactured with a door set.
 - b. The door will be supported by the type hinge applicable to the particular door problem.
 - c. The door must be fitted with some type of latch (friction, magnetic, etc.) or lock.
 3. Frame and Panel
 - a. The frame must have reinforced corner joints (a good place to include dowel joints)
 - b. The panel may be supported by either a rabbet or groove in the frame.
 4. Joints
 - a. Pocket Holes
 - b. Dowel Joints
 - c. Spline and Biscuit Joint
 - c. Tongue and Groove
 - d. Mortise and Tenon Joint
 5. The cabinet you make in this class must be of excellent quality, carefully planned, skillfully constructed and expertly finished. It should be representative of the craftsmanship of an advanced student.
- B. Project drawings, Bill of Materials, and Plan of Procedure
 1. Prepare preliminary drawings of the cabinet based on accepted principles of furniture and cabinet design. This drawing may be accomplished on the board or with a CAD program and must be approved before you begin construction of the project.
 2. Prepare a B.O.M. for your cabinet. This must be approved before construction.

Articulation Agreements:

Saginaw Valley State University

5 credit hours toward a Bachelor of Science Degree in Industrial Technology Education

Michigan Career and Technical Institute