

**Honolulu Community College
Marine Education and Training Center
Boat Maintenance and Repair Program**

Course Syllabus

Course Name: Woodworking I

Course Number: MARR 30

Course Credits and Hours: 3 credits; 90 hours lecture/lab

Prerequisites: MARR 22

Course Description: This course covers the safe and proper use of power and hand woodworking tools. Procedures for sharpening, maintenance, and adjustment of tools are stressed. Rough wood stock is milled and basic practice on making proper wood joints is provided. Several projects will be required to be fabricated to show the student's understanding of measurement, joint utilization, aesthetics and safety procedures.

Course Objectives:

- 1) To learn and practice safety rules and regulations of the wood shop.
- 2) Sharpen, tune, and efficiently use woodworking handtools to professional standards.
- 3) Sharpen, adjust, safely and efficiently operate the joiner, thickness planer, bandsaw, table saw, and radial arm saw.
- 4) True wood stock accurately, safely and efficiently.
- 5) Identify species of wood common to boatbuilding and repair. The student will also be introduced to wood technology, lumber grading, detection of defects, and prediction of dimensional stability using a moisture meter.
- 6) Practice fundamentals of marine joinery, including the safe and proper use of adhesives and fastenings.
- 7) Practice interpreting and building from basic working drawings (blueprints).
- 8) Construct shop fixtures and marine joiners tool box.

Outline of Instruction:

A. SHOP SAFETY

1. Eye Protection
2. Hearing Protection
3. Respiratory Protection
4. Conduct

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5. Clothing
6. Material Safety Data Sheets

B. SHARPENING FUNDAMENTALS

1. Grinding Techniques
2. Honing Techniques

C. HAND TOOLS (INCLUDES SHARPENING, TUNING, AND SAFE USE)

1. Block Plane
2. Chisels
3. Smoothing Plane
4. Spoke shave

D. MEASURING TOOLS

1. Stick Rule
2. Tape
3. Bevel Gauge And Protractor
4. Levels

E. STATIONARY POWER TOOLS (includes sharpening, adjustments and safe operation)

1. Thickness Planer
2. Radial Arm Saw
3. Tool Grinder
4. Disc Sander
5. Surfacing Sander

F. PORTABLE POWER TOOLS

1. Drills
2. Routers
3. Circular Saw
4. Sanders
5. Biscuit Jointer

G. WOOD JOINERY

1. Cross-Lap Joint
2. Mortise And Tenon Joint
3. Scarph Joint
4. Biscuit Joint

H. WOOD TECHNOLOGY

1. Wood Types
2. Grading

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3. Shrinkage Predictions
4. Moisture Meter

I. FASTENINGS

1. Types Used In Boatbuilding
2. Galvanic Corrosion

J. ADHESIVES

1. Epoxy
2. Water-based
3. Urea/formaldehyde
2. Polyurethane

Evaluation:

Standard Alpha System

A	94 -100
B	88 -93
C	80 -87
D	70 -80
F	below 70

Evaluation by percentages

Shop Projects	40%
Written Quizzes	40 %
Work Habits	20%

The evaluation addresses behavior such as “Does the student report to class on time and prepared? Does the student use lab time wisely? Does the student cooperate with the instructor and team members? Is METC policy followed? Does the student participate in class discussions?”

Many handouts will be issued to you throughout your career at the METC. It is imperative that you keep a three-ring binder with labeled dividers. During some written tests you will be allowed to refer to your notes. You will also find it beneficial to refer to your notebook while executing projects. Your notebook will directly effect your written and "hands on" project scores. Your notebooks will periodically be turned in and evaluated.

Prompt attendance is vital to your success. Many "hands-on" projects and demonstrations simply can not be repeated. The table below demonstrates how absences and tardiness will limit how high a grade you will be eligible to receive for this course.

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If you miss:	You are eligible for a(n)
5 hours or less	A
10 hours or less	B
15 hours or less	C
20 hours or less	D
More than 24 hours	F

Each Tardy will equal 1/2 Hour Absent. This includes being late to returning to class after a designated break.

Please call to inform if you are going to be absent. Many of our projects are tackled as a team. We need to know if a team member is going to be absent. The answering machine is on phone # **832-3682**.

If you do not call to notify of your absence and there is a test, and you are granted permission to take a make-up test, a 14 point (based on 100 pt. scale) penalty can be deducted from your make-up score. Be advised that any make-up exam administered may be different in format from the original exam, and may include oral examination.

Required Textbooks:

Modern Woodworking, Wagner, Goodheart-Wilcox Co.

Other Comments:

The student is required to supply their own set of hand woodworking tools. The list of required tools follows on the next page:

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REQUIRED TOOL LIST FOR METC STUDENTS
SECOND SEMESTER

QTY	ITEM	RECOMENDED BRAND & MODEL	Vendor	PRICE
1	SMOOTHING PLANE	STANLEY 12-904 (9 3/4 inch)	Wood Crafters	55.72
1	BLOCK PLANE	STANLEY 12-920 (6 inch)	Wood Crafters	48.19
1	FLAT SOLED SPOKESHAVE	STANLEY 12-951	Wood Crafters	20.59
1	BACK SAW	Crown Tools 10 inch	Wood Crafters	21.39
1	1" Varnish Brush	Wooster/Sears	Home Depot	5.00
1 SET	CHISELS 1/4, 1/2, 3/4, 1, 1 1/4, 1 1/2 INCH	Record 6 pc. 1/4" - 1-1/4" Crown Tools 1-1/2"	Wood Crafters Wood Crafters	67.39 21.39
1	Scratch Awl	Husky 693-239	Home Depot	4.77
1	HALF ROUND BASTARD WOOD RASP	Nicholson 10 inch	Wood Crafters	14.99
1	FLAT SMOOTH FILE 8 INCH	Nicholson	Home Depot	7.86
1	SLIDING T BEVEL	Johnson B75	Home Depot	3.48
1	TRY SQUARE	Johnson 450	Home Depot	3.86
1	COMBINATION SQUARE	STANLEY 46-131	Home Depot	14.86
1	PROTRACTOR	From MARR 29		
1	SET twist bits (high speed steel) 1/16-1/4 "	Vermont American	Home Depot	9.97
1 SET	COUNTER SINK BITS	STANLEY 10 piece Modular Drill & Drive set. (Counter sink bit set)	Home Depot	12.97
1	Options on Counter Sinks (Makita Quad Driver 51)			
1	Japenese Saw	Pull saw 26 point 6 1/2"	Wood Crafters	