

## Course Syllabus

**Course Name:** Marine Blueprint Reading and Lofting

**Course Number:** MARR 40

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

**Prerequisites:** MARR 29

**Course Description:** Covers the reading and interpretation of boat plans. The primary focus is on the lofting of the Lines Plan. The Lines Plan describes the shape of the hull. An understanding of these lines, which was begun in MARR 29, is fundamental to any boat building, renovation, or major repair project. Projects in the drafting lab and on loft floor provide practical experience in relating the blueprints to the construction or renovation of a boat.

### Course Objectives:

Upon successful completion of this course, the student will be able to:

1. Utilize basic mechanical drafting tools to manipulate lines plan of a boat
2. Demonstrate understanding of a lines plan by adding waterlines, buttocks, sections, and diagonals to existing drawing
3. Prepare full size drawings (lofting) of a boat in order to build mold stations, stem, keel and transom
4. Expand transom (develop true shape of transom from an auxiliary view)

### Course Outline:

#### I. LINES DRAWING

- A. Profile
- B. Body
- C. Half Breadth
  1. Symmetrical
  2. A-symmetrical
- D. Interpreting inter-relationships between profile, body, half breadth

#### II. WORKING WITH WATERLINES, BUTTOCKS, DIAGONALS, SECTIONS

- A. Checking Fairness with Diagonals
- B. Demonstrating use of Splines, Battens and Ducks
- C. Table of Offsets

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III. LOFTING

- A. Lofting Board
- B. Station Set Up
- C. Drawing Lines Full Size
- D. Computer generated drawings
- E. "Picking up" Dimensions and Transferring
- F. Bevels

IV. TRANSOM EXPANSION

- A. Layout
- B. Raked
- C. Raked and Curved

**Evaluation:**

Standard Alpha System:

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

Evaluation by percentages:

40% - Hands on projects and exercises; graded for accuracy, neatness and attention to detail.

40% - Written tests; given to determine understanding of principals

20% - METC's Work Habits Evaluation\*

\*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.

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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.

<b>If you miss:</b>	<b>You are eligible for a(n)</b>
5 hours or less	A
10 hours or less	B
15 hours or less	C
20 hours or less	D
More than 20 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.

**Textbooks:**

*Gougeon Brothers On Boat Construction*, Meade Gougeon, Pendell Printing, Inc.

*Basic Blueprint Reading and Sketching*, Seventh Edition, Olivo, Delmar Publishing