

Massachusetts Maritime Academy
RADAR Observer (MT 3122)
Fall Semester 2012

Instructor

CDR Linda Letourneau
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Course prerequisites

Coastal Navigation I
Rules of the Road (including all assessments)

Learning Objectives

This course is designed to meet all the RADAR Observer knowledge based assessments and twelve performance based assessments, which form part of the requirements for Officer in Charge of a Navigation Watch (STCW 95 Table A-II/1).

Learning Outcomes

A candidate successfully completing the Radar Observer Certification (MT3122) course will be able to explain the theory behind Radar technology, recognize when radar should be in use, will select a suitable mode and range setting for the circumstances, will be able to set the controls for optimal performance, and will be aware of the limitations of the equipment in detecting targets in terms of accuracy. When in range of the coast, the operator will be able to compare the radar display with the chart, select suitable land targets and use these targets to fix position. The operator will be aware of the need to maintain a continuing plot of ship targets which may pose a potential threat of collision, and will be able to derive from the plot the necessary information about other ship's courses, speeds and closest points of approach to enable action to be taken in ample time, in accordance with 72-COLREGS and Inland Rules, and to prevent a close quarters situation arising.

Required Text and Equipment

RADAR Observer Manual-Sixth Edition
Pub 1310- RADAR NAVIGATION AND MANEUVERING BOARD MANUAL-Seven Edition
Department of Transportation, *Navigation Rules*
Furuno Operations Manuals
Plotting tools, including a compass, triangles & Radar Plotting sheets
1 ½' binder with 5 dividers and note paper

Learning Disabilities

Mass Maritime is committed to providing reasonable accommodations to students with documented disabilities. Students who believe they may need accommodations in this class are required to contact Professor Fran Tiskevich, the Director of Disability Compliance, within the first two weeks of class in RM 311AHarrington, MMA ext. 2208 or ftishkevich@maritime.edu

Attendance

Attendance is mandatory at all classes and labs. Disciplinary action (pink mail) will be taken for unexcused absences. Notice of absence for any reason must be given to the instructor prior to the respective class. Cadets are responsible for reading assignments, classroom lectures, tests, quizzes, and assigned homework.

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Grade Policy

An overall course grade of 70% or above and a P (pass) on the twelve practical assessments must be achieved to satisfy STCW requirements.

*In addition to the STCW requirement, a minimum of 70% on the theory final exam, 90% on both the simulator collision avoidance and navigation final exams, and 90% on the paper plot final exam, must be achieved to receive the USCG RADAR certificate and pass the course.

In class Quiz average	25%	Take home Quiz average(HW)	20%
Midterm exam	20%	Class participation & attendance	10%
Notebook	5%	Final exam (Qual average*)	20%

Notebooks

Radar notebooks will be periodically checked and a grade will be given at the end of the semester. The notebook grade will be worth 5% of your final grade. It will be graded on the following content: notes, lab documents, take home quizzes (HW), course documents, and over all organization. Notebooks will be collected at the start of the last lab session

Take home Quizzes (homework)

Take home quizzes are worth 20% of your final course grade. Quizzes turned in late will be marked down 10 points for every day it's late. If you are absent from class it's still due that day.

Cheating

Cheating will not be tolerated. Appropriate disciplinary action will be taken. A zero will be given for the respective quiz, plot, homework assignment, or exam. Don't do it!

Blackboard

Course material and announcements may be posted on Blackboard. Prior to class meetings, the student is responsible for checking Blackboard for notices, assignments, and other course information.

Furuno Operators Manual

At the beginning of the semester each student will be loaned a copy of the Furuno Operators Manual. At the end of the semester, the student must return or replace the manual before a final grade will be given.

Extra Help

Students are encouraged to seek extra help. I will be either in my office or in the Radar lab during my posted office hours. I am available at other times with an appointment. If you feel that you are falling behind, don't wait until it's too late to get caught up.

Snacks and Cell phones

Eating and/or drinking will not be permitted in the RADAR lab or in the classroom. NO cell phones will be permitted in the radar lab. Tap sheets will be issued to anyone texting during class or lab hours.

Uniforms

The proper uniform shall be maintained while in the classroom and in labs. Disciplinary action will be taken for students out of uniform. Boiler suits may only be worn if coming directly from or to a lab or shipboard maintenance where that uniform is permitted.

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Fall 2012 Lab Syllabus**

<u>Lab</u>	<u>Lab exercise topic</u>	<u>Reading assignment</u>
01	Introduction to Radar controls	Furuno Manual
02	Plotting- Relative motion, CPA, & TCPA Grease pencil demo	Pub 1310- pages 59, 90, 91
03	Plotting- Course, speed, & aspect	Pub 1310- pages 92,93
04	Plotting-Course & speed changes in accordance with Rule of the road executing C&S change& assessments	Rule of the road Pub 1310- pages 96-99
05	Plotting courseets & speed changes, application of new course or speed to other targets	Pub 1310 Chapter 3 Hand out
06	Plotting- Graded exercise & assessments	Review
07	Introduction to Radar navigation	Pub 1310- Ch. 4
08	Radar navigation & Parallel indexing	Pub 1310- Ch. 4
09	Radar Navigation (with traffic)-Graded exercise & assessments	Review
10	Live RADAR & Faulty interpretation, SARTS & RACONS & assessments	Furuno Manual Pub 1310- pages 152-156
11	Practical final exam part I- Collision avoidance & assessments	Review
12	Practical final exam part II- Navigation & assessments	Review
13	Practical retakes and make up assessments	Review
14	Finals Week- Written theory and paper plot exam	Review