



## Massachusetts Maritime Academy

AUTOMATIC RADAR PLOTTING AID  
ARPA  
COURSE: MT-3222 (CREDITS: 2)  
SPRING SEMESTER ACADEMIC YEAR 2022  
COURSE LEVEL: UNDERGRADUATE

Assistant Professor	Lieutenant Albion Cassius Llewellyn
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Department	Marine Transportation

### Class Location & Time

SECTION	Location	DAYS	TIME
MT-3222-26	Bresnahan Building, 305	Tuesday	1300-1550

**Office Hours:**

Tuesday 0900 -0950, Wednesday & Friday 1000-1050

**Course Description**

his course is designed to meet all ARPA knowledge-based assessments and the fourteen performance-based assessments, which form part of the requirements for Officer in Charge of a Navigation Watch (STCW 10). Students who successfully complete the course will be able to choose an appropriate mode of display, select plotting graphics control suitable to the circumstances, make appropriate use of operational alarms, acquire and track those targets which present a potential threat of collision, extract the information needed on course, speed, and closest point of approach to enable early action and prevent a close-quarters situation, and use ARPA to confirm and monitor their actions. Students will be aware of the dangers of overreliance on automatic acquisition and tracking of targets and on operational alarms. They will also be aware of factors (including errors in the course and speed inputs) that may affect the accuracy and the correct functioning of the ARPA. This course satisfies the requirements for a USCG ARPA endorsement

**Course requirement & prerequisites**

This is a two-credit-hour course, and students are required to successfully complete Radar Observer (MT 3122) with a minimum grade of C-.

**Teaching Facilities and Equipment**

Lecture and laboratory will be hosted in the Integrated Navigation Laboratory, located on the third floor of the Harrington Building. Course material and assignments will be delivered through MMA's multimedia and Blackboard. If the present health crisis deteriorates and requires remote learning, meetings would revert to a prearranged online platform.

**Case Study Presentation**

Inductive reasoning has proven to be a very effective method of learning. Most students learn better through real-life scenarios. Each student will be assigned a case study. Students will analyze the incident/ accident and present their findings to the class. This exercise is to designed help build upon the students' problem solving and analytical skills. During the presentation, each group should ascertain the following:

- 1) The issue/ problem
- 2) Events leading up to the problem
- 3) Key factors and event
- 4) Lessons learned
- 5) Make recommendations

Students shall compose a 4-page report (1000 words). The report should summarize your presentation and should identify the five topics listed in the previous paragraph.

Note: Both presentation and paper shall be properly referenced (APA format preferred)

**Classroom Policies*****In-person:***

- Cadets will wear the appropriate uniform of the day in lecture classrooms. Commuter students should wear appropriate clothing.
- Eating, drinking, or the use of tobacco products is prohibited from all classes.
- The use of cell phones is disallowed; however, personal computers or tablets are permitted ONLY for course material. If students are caught using their cell phones, browsing social media, or browsing the inappropriate website, they will be placed on report, and or evicted from class.
- If a student was to be justifiably evicted, they will not receive credit for that day.
- Cheating will not be tolerated and immediate disciplinary action will be taken against the student. Disciplinary action for cheating violation may include a grade of ZERO or their actions reported to the Honor-board committee.

***Online***

- Please keep the computer microphone muted, to avoid disruption from sound feedback, interference, and background noise.
- Avoid being disruptive and do not speak over the instructor.
- Cadets shall wear the appropriate clothing.
- Eating and the use of tobacco products are prohibited from all lectures.
- The use of cell phones is disallowed; however, personal computers or tablets are permitted.
- During lectures, students should avoid browsing internet content not related to the subject of discussion.

### **Student learning expectations:**

Below are fourteen operational STCW assessments that are required to complete this course. If a student is either absent for an assessment or fails an assessment, a second opportunity will be offered at a date predetermined by the instructor. Failure to pass all assessments will result in an incomplete ('I'). If the incomplete is not rectified before the course is complete, the incomplete is automatically converted to a failure ('F').

#### **Operational STCW Assessment**

- OICNW-3-1E Determine risk of collision
- OICNW-3-2A Set up and maintain an ARPA display
- OICNW-3-2B Manual target acquisition
- OICNW-3-2C Establish an exclusion area
- OICNW-3-2D Set vector characteristics
- OICNW-3-2E Designate targets
- OICNW-3-2F Cancel targets
- OICNW-3-2G Target history
- OICNW-3-2H Establish CPA and TCPA
- OICNW-3-2I Establish alarm area
- OICNW-3-2J Trial Maneuver
- OICNW-3-2K Switch stabilization modes
- OICNW-3-2L Navigation lines
- OICNW-3-2M Determine set and drift

### **Learning Disabilities**

Massachusetts Maritime Academy, upon request, accommodates students with documented learning disabilities. The ADA Coordinator, Asst. Dean Elaine Craghead evaluates the documentation provided, determines appropriate services, and is available to discuss accommodations with students. The Disability Resources office is located in the Academic Resource Center, ABS 320. Students can drop in during normal business hours, M-F 0800-1600, or call x5120, or email [ADAcompliance@maritime.edu](mailto:ADAcompliance@maritime.edu).

### **Sexual Harassment and Misconduct**

Our school is committed to fostering a safe, productive learning environment. Title IX and our school policy prohibit discrimination based on sex. Sexual misconduct including harassment, domestic and dating violence, sexual assault, and stalking are also prohibited at our school.

Our school encourages anyone experiencing sexual misconduct to talk to someone about what happened, so they can get the support they need and our school can respond appropriately. If you wish to speak confidentially about an incident of sexual misconduct, want more information about filing a report, or have questions about school policies and procedures, please contact our Title IX Coordinator, which can be found on our school's website.

### **Examinations Grading and Attendance**

ARPA (MT-3222) is an STCW knowledge-based course requiring a minimum passing grade of 70%. If students are unable to achieve the mentioned passing grade, it may result in failure of the course.

Regular tests on lecture material, reading assignments, PowerPoint® presentation notes, and classroom handouts will be administered. You are expected to complete all assigned reading and are accountable for any information found in the lecture material, reading assignments, PowerPoint® presentation notes, and classroom handouts.

Final course grades will be awarded as listed below. \*To receive the USCG-approved ARPA certificate a minimum of 70% on the theory final exam and a P (pass) on all of the operations assessments must be achieved.

Absence for medical court or legal obligation, the varsity is permitted however, students are responsible for the course material. Disciplinary action may be taken for unauthorized absences **and anyone who has more than four class-long, unexcused absences will receive an "F" grade for the COURSE.**

Final Grade Computation:

Exams	80%
Presentation	15%
Attendance and participation	5%
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	100%

The following is a breakdown of the final course grading:

93.0 – 100	<b>A</b>
90.0 – 92.9	<b>A-</b>
87.0 – 89.9	<b>B+</b>
83.0 – 86.9	<b>B</b>
80.0 – 82.9	<b>B-</b>
77.0 – 79.9	<b>C+</b>
73.0 – 76.9	<b>C</b>
70.0 – 72.9	<b>C-</b>
67.0 – 69.9	<b>D+</b>
63.0 – 66.9	<b>D</b>
60.0 – 62.9	<b>D-</b>
Below 60.0	<b>F</b>
Incomplete	<b>I</b>

**Syllabus Changes**

The syllabus and course schedule is tentative and may be adjusted as required to meet the goals and objectives of the course. Notice of changes will be made to students as soon as possible.