

# Massachusetts Maritime Academy

## GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

### COURSE MT 4122 (Credits - 4)

REVISED: September 1, 2015

Spring Semester Academic Year 15-16

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#### 1. Instructors

Professor: Dr. James J. Fitzpatrick, USCG MASTER UNLIMITED

Professor: Mr. Andrew Perrone

OFFICE: 3<sup>rd</sup> Deck Bresnahan Building Room C303

I can be reached by telephone at extension 2109 or in the Lab at 2148. If you can't reach me at the above number you may leave a message and I will return the call. If you need to reach me in an emergency please call my cell phone number: 508-736-5113. I can also be reached via email at [jfitzpatrick@maritime.edu](mailto:jfitzpatrick@maritime.edu)

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 Dr. Fran Tishkevich, Director of Disability Compliance, within the first two weeks of class. Dr. Tishkevich can be reached at [ftishkevich@maritime.edu](mailto:ftishkevich@maritime.edu) and at ext 2208.

MMA Health Services realizes that students may encounter situations which could impede their academic, personal and social development and success. Counseling services are designed to help students address these concerns, increase their self-awareness and empower them to manage challenging areas in their lives. To schedule a confidential appointment please call Jennifer Levesque - Mental Health Counselor, Health Services  
Phone: 508-830-5000 x1480

Email: [jlevesque@maritime.edu](mailto:jlevesque@maritime.edu)

Location: 3rd Co

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### 2 Catalog Description

**Pre-requisite: MT3221**

Students will be taught to operate the radio communications equipment required on board GMDSS-compliant vessels. Students will become proficient with GMDSS equipment and procedural operation along with developing knowledge of radio wave propagation. The GMDSS courses contain all of the elements contained in the GMDSS model course developed in the United States. This course satisfies the requirements necessary to earn the classroom and laboratory STCW-95 endorsement as a Global Maritime Distress and Safety System Operator.

### 3. Text

T1 - Introduction to GMDSS, J. Patrick Allen, Mercomms unlimited, 2<sup>nd</sup> edition 2007

### 4. Supplementary Reading

47 CFR Part 80.

Marine Radio navigation and Communications, Monroe and Bushy, 1998.

[http://wireless.fcc.gov/commoperators/index.htm?job=question\\_pools](http://wireless.fcc.gov/commoperators/index.htm?job=question_pools)

Examinations Question Pools Elements 1&7

### 5. Class Format

Role playing, Critical Thinking and Lecturettes with group discussions. Class participation includes: class attendance, attentiveness, good behavior and respect for classmates and the instructor. All these factors are considered for your class participation grade.

### 6. Learning Objectives

As per US GMDSS Task Force syllabus

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This course is designed to meet all GMDSS STCW 95 knowledge based and competency assessments, which form part of the requirement for Officer in Charge of a Navigation Watch (STCW 95).

The aim of the course is to provide the student with a comprehensive and practical understanding and operation of the GMDSS.

Additionally the following is covered in the course.

Demonstrate knowledge and understanding of the following STCW elements:

GMDSS-11.14 search and rescue radiocommunications

GMDSS-11.14 procedures in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual

GMDSS-11.14 means to prevent the transmission of false distress alerts and the procedures to mitigate the effects of such alerts

GMDSS-11.14 ship reporting systems

GMDSS-12.1 provision of radio services in emergencies - abandon ship

GMDSS-12.1 provision of radio services in emergencies - fire on board ship

GMDSS-12.1 provision of radio services in emergencies - partial or full breakdown of radio installations

GMDSS-12.2 Preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical and non-ionizing radiation hazards

### Learning Outcomes

Upon completion of the course the student will be able to operate and stand a radio watch for a

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shipboard GMDSS station. The student will be able to send distress, safety and urgency messages to ship and shore based radio stations. The student will be exposed to sufficient theoretical knowledge of GMDSS to successfully pass the FCC GMDSS General Operators license (element 7).

#### **GMDSS Competencies**

There will be 2 chances to demonstrate competencies on each piece of equipment set forth by the US GMDSS Task Force.

A student that passes the competencies on the first attempt will receive a mark of 100. A student that passes on the second attempt will receive a mark of 75

- \* **Should a student fail to demonstrate competency during the second attempt on any piece of equipment s/he will fail the course.** There will be no exceptions made to this policy.
- \* Make-up competencies will be scheduled by appointment only. A student that fails to make up a competency by ***December 09, 2015*** will fail the course.

**Examinations and Quizzes:** There will be one quiz per week covering all material addressed in the course prior to the quiz. A passing grade of **75%** is required for issuance of the STCW'95 endorsement and FCC GMDSS General Operator License.

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**Final Grade Calculation:**

1) Average of Quiz grades	30%
2) Exam 1	20%
3) Exam 2	20%
4) GMDSS Competencies	<u>30%</u>
	100%

The following is a breakdown of the final course letter grading:

89.0 - 100.0	A
87.0 – 88.9	A - minus
85.0 – 86.9	B+
83.0 – 84.9	B
81.0 – 82.9	B - minus
79.0 – 80.9	C+
77.0 – 78.9	C
75.0 – 76.9	C- minus
<b><i>73.0 – 74.9</i></b>	<b><i>D+</i></b>
<b><i>71.0 – 72.9</i></b>	<b><i>D</i></b>
<b><i>69.0 – 70.9</i></b>	<b><i>D-</i></b>
<b><i>Below 69.0</i></b>	<b><i>F</i></b>

A final course grade below C- minus (indicated in red italic) does not satisfy the STCW requirement and constitutes retaking of the entire course for STCW credit.

Additionally, the FCC element 7 (GMDSS General Operator) license is required for issuance of the STCW certificate for OICNW. Students will find test centers for this license at the Federal Communications web site ([www.fcc.gov](http://www.fcc.gov)).

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**8. Attendance Policy**

**ATTENDANCE AT ALL CLASSES IS MANDATORY.** Unauthorized absence will not be tolerated. Disciplinary action and/or grade point reduction will be administered to repeat offenders. ***More than four (4) absences of any nature will result in a failure to meet the STCW '95 attendance policy and consequently means course failure.***

Tardy students (more than 5 minutes) will be assessed an absence. Students not prepared for class (homework, course book, pen, pencil, and notebook) will be asked to leave and be marked absent.

Students asked to leave for any reason will be marked absent for the day.

Authorized absences should be reported to me the day of the missed class, preferable by email. Make-up examinations for authorized periods of absence will be scheduled for a mutually agreed upon time. **Authorized** absences still constitute a STCW absence and are governed by the above scale as set forth by the Academy's STCW course submittal.

**NOTE: Examinations missed as a result of an unauthorized absence will receive a grade of ZERO.**

**9. Syllabus Changes**

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

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10. COURSE OUTLINE AND SCHEDULE

LESSON TOPICS BY CLASS MEETINGS

<b>Lessons</b>	<b>Week Beginning</b>	<b>Lesson Topic</b>
1,2,3.	08/31	Course Overview and Review of Electronic Navigation
4,5,6.	09/07	Part 80 Rules and Regulations / Basic Communications <b>Quiz 1</b>
7,8,9.	09/14	Purpose and use of Digital Selective Calling (DSC) facilities <b>Quiz 2</b>
10,11,12.	09/21	NBDP <b>Quiz 3</b>
13,14,15	09/28	INMARSAT Systems <b>Quiz 4</b>
16,17,18	10/05	Theoretical and Practical use of Ship Station Equipment MF/HF <b>Quiz 5</b>
19,20,21.	10/13	MF/HF <b>Quiz 6 Exam 1 (This is a Tuesday night)</b>
22,23,24	10/19	Survival Craft Transceivers / Batteries / Fault Location / EPIRB <b>Quiz 7</b>
25,26,27	10/26	SART / Marine Safety Information / Search and Rescue <b>Quiz 8</b>
28,29,30	11/02	Distress, Safety, and Urgency Communications Procedures <b>Quiz 9</b>
31,32,33	11/09	False Alerts, Equipment Tests, Radio Log keeping <b>Quiz 10</b>
34,35,36	11/16	Radio Voyage Planning
37,38,39	11/30	Sea Term Voyage Planning Workshop
40.	11/07	<b>Final Recap Exam 2</b>

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**11. LABORATORY OUTLINE AND SCHEDULE SECTION XX**

**LABORATORY TOPICS BY CLASS MEETINGS**

<b>LAB#</b>	<b>Day</b>	<b>Date</b>	<b>Lesson Topic</b>
01.	THURS	09/03	GMDSS Laboratory Equipment familiarization - rules and safety
02.	THURS	09/10	VHF Radiotelephone and DSC Tutor & Manual
03.	THURS	09/17	VHF Radiotelephone and DSC competencies demonstration
04.	THURS	09/24	VHF Radiotelephone and DSC competency practice
05.	THURS	10/01	INMARSAT C Tutor & Manual
06.	THURS	10/08	INMARSAT C competencies demonstration
07.	THURS	10/15	INMARSAT C competencies practice
08.	THURS	10/22	MF/HF Radiotelephony Tutor & Manual
09.	THURS	10/29	MF/HF SITOR Tutor & Manual
10.	THURS	11/05	MF/HF competency practice
11.	THURS	11/19	STCW Competency Examinations INMARSAT C & VHF DSC
12.	THURS	12/03	<b>STCW Competency Examinations MF/HF/DSC/SITOR</b>
13.	THURS	12/10	<b>Last day to complete STCW Competency Examinations</b>

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TO: CAPT. JAMES J. FITZPATRICK Ed.D.

FROM: Enrolled Student

RE: Receipt of Course Documents

I hereby acknowledge that I am in receipt of the Course Syllabus and the Course Schedule for this course. I further acknowledge that CAPT Fitzpatrick has explain the syllabus and course schedule during class and that I have read and understand all sections including class policies.

I acknowledge that I have taken and passed the required pre-requisite course listed below:

- **Pre-requisite: MT3221- Electronic Navigation**

NAME: (print) \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

STUDENT ID NUMBER \_\_\_\_\_

CLASS SECTION: \_\_\_\_\_

DATE: \_\_\_\_\_