



Massachusetts Maritime Academy
VESSEL FAMILIARIZATION AND BASIC SAFETY TRAINING
COURSE: MT1111 (CREDITS: 4)
FALL SEMESTER ACADEMIC YEAR 2024

Syllabus is subject to change per Instructors discretion

Capt Dias Office Harrington 306:

Students are expected to study on a daily basis to gain knowledge of key concepts discussed in lecture/lab and to prepare for exams. **If for some reason you feel you are falling behind, need extra help, or would like help to prepare for exams, do not hesitate to contact me so we can address your concerns early.** I want to help you succeed.

All students are encouraged to attend student/office hours. The concepts in this class are new to you and may require additional instruction. If my scheduled student hours conflict with your academic schedule, please coordinate a time with me, via email @ zdias@maritime.edu, that will better accommodate.

CAPT Zachary C. Dias Office- Harrington 306 - Fall 2024 Semester Schedule <i>Student Hours also available by mutually scheduled time</i>					
Period	Monday	Tuesday	Wednesday	Thursday	Friday
0800-0850	Student Hour	Student Hour		Tugs 2 Simulation	
0900-0950		Student Hour		Tugs 2 Simulation	
1000-1050	Vessel Fam Lab Sect 13	Tugs 1 Simulation		Tugs 2 Simulation	
1100-1150	Vessel Fam Lab Sect 13	Tugs 1 Simulation		Tugs 2 Simulation	
1200-1250		Vessel Fam Lab Sect 25			
1300-1350		Vessel Fam Lab Sect 25		Tugs 1 Lecture	
1400-1450	Vessel Fam Lect Sect 17		Vessel Fam Lect Sect 17	Tugs 1 Lecture	
1500-1550	(1400-1515)		(1400-1515)		

*****Wednesdays 1600-1900 Starting 18 September*****

Office/Student hours also available by in-person/virtual scheduled appointments

Required Textbooks

- Survival Guide for the Mariner ISBN 0-87033-444-1

Copies maybe purchased or loaned from the bookstore or through online resources

- The Cornell Manual for Lifeboatmen, Able Seamen, and Qualified Members of Engine Department, 2nd Edition (ISBN: 978-0-87033-559)

Copies maybe loaned through MMA library

*****Optional Study Materials*****

Using the below study material will **assist** in preparing you for quizzes during the semester. NOTE: quiz questions will be a variation of Captain Murphy Book questions, power point materials, and lecture notes

- Deck Officer Study Guide Deck General – Captain Joseph Murphy
- Deck Officer Study Guide Deck Safety – Captain Joseph Murphy
- Deck Examination Illustration Book – Captain Joseph Murphy

Copies located in MMA Library or by online purchase

Personal Survival & PPE Study Pages:

Deck Safety Book: Pgs 39-90

Deck Illustration Book: Pgs 4-6, 4-10, 4-11

Firefighting Study Pages:

Deck Safety Book:

Pgs 27-38

Pgs 189-226

Deck Illustration Book: Pgs 4-2

Watch Keeping:

Deck General Book: Pgs 111-118

Recommended Resources

- American Merchant Seaman's Manual, 7th Edition (ISBN-10: 0870335499/ISBN-13: 978-0870335495) (digital copy on Blackboard)
- TS KENNEDY Vessel Safety Manual (digital copy on Blackboard)
- A Practical Guide to Lifeboat Survival, (ISBN: 1-55750-121-1) –
- Ship Knowledge, 9th Edition, (ISBN: 978-90-71500-32-9)

Scope

This course is based on IMO Model Courses 1.19 (Personal Survival), 1.20 (Basic Fire-Fighting) and elements of 2.03 (Advanced Training in Fire-Fighting) which covers the training recommended in resolution 19 and Annex 1 of IMO Assembly resolution A.437 (XI) on training of seafarers in personal survival and fire-fighting techniques adopted by the International Conference on Training and Certification of Seafarers, 1978 as required by 46 CFR 15.1105, *Familiarization and Basic Safety Training*.

Learning Objectives

At the completion of this course, each cadet is required to complete the learning objectives and assessment standards set forth in the STCW-95 (as amended) course for Vessel Familiarization and Basic Safety Training.

Learning Outcomes

Upon completion of this course, students will be able to react in a correct manner during emergency situations, take measures appropriate to his/her own survival and to the survival of others, and use survival equipment correctly. Additionally, a student will be able to react in a correct manner in the event of an outbreak of fire, to take appropriate measures for the safety of personnel and of the ship, and to use fire appliances correctly. He/she will also be able to state and demonstrate that he/she has acquired knowledge

and skills, which, in some instances, will enable him/her to identify and correct defects and thus prevent emergencies from occurring.

Entry Standards

This course is presented in English. Trainees must be able to read, write, speak and understand English. This course is open to any cadet and must be successfully completed before enrolling for Sea Term aboard the T.S. Kennedy. There are no prerequisite educational requirements. All trainees must be certified by a doctor to be in good health and fit in all respects for training in personal survival.

Teaching Facilities and Equipment

The Vessel Familiarization and Basic Safety Training (MT1111) course will be presented in the Massachusetts Maritime Academy's academic facilities. A classroom or lecture hall equipped with a black/white board or flip chart supported by audio-visual aids when making use of audio-visual materials such as personal computer presentation software, transparencies, videos or slides will be provided for lectures. Course information and course documents will be posted electronically on the Blackboard.

In addition, practical demonstrations and/or drills will be conducted at the Academy's full equipped Sea Laboratory, swimming pool and waterfront facilities as well as aboard the Training Ship Kennedy, Training Vessel Ranger as well as motor whale boats and monomys whenever the instruction or practical exercises require access to water or use of SOLAS/U.S. Coast Guard approved survival equipment.

Teaching Aids (A)

- A1 Vessel Familiarization and Basic Safety Training (MT1111) Instructor Manual
- A2 Classroom handouts/notes
- A3 Audiovisual aids: PowerPoint presentations
- A4 Audiovisual aids: Video projector
- A5 Audiovisual aids: Multimedia projector with computer
- A6 Personal computer
- A7 Cutaway equipment
- A8 T.S. Kennedy, equipment and fittings
- A9 T.V. Ranger, equipment and fittings
- A10 T.V. Towline, equipment and fittings
- A11 Certified lifeboat/gravity davit
- A12 Motor whale boat
- A13 USCG certified inflatable liferaft cradle and davit launch/immersion suits
- A14 USCG approved covered lifeboat
- A15 Monomoy (pulling) rowing boat

- V1 Water Entry and Survival Techniques (27 minutes)
- V2 Man Overboard, A Guide to Rescue and Treatment of Man Overboard Victims (31 minutes)
- V3 Lifeboat Operation and Survival Practices (25 minutes)
- V4 Liferaft Operation and Survival Practices (28 minutes)
- V5 First Aid Basics Training Program (30 minutes)
- V6 Snap-back (USN)

Safety Routines

Safety precautions during drills are a major component of this course, and affect its organization. Trainees must be protected from danger at all times whilst the course is in progress.

Instructors and their assistants must strictly supervise the trainees, and act as their safety guards. First aid supplies, including a resuscitation kit, must be close at hand. If drills are to take place in the sea, a rescue boat must be in attendance. Night drills must not be performed unless all trainees and instructors have been provided with lifejackets having retro-reflective material as specified in SOLAS, Chapter 111, Regulation 30.2.7. Searchlights must illuminate the practice area.

Course Structure

The course is four credits, *involving two (2) lectures per week and one (1) two (2) hour laboratory.*

Subject to change at discretion of instructor:

There will be 4 unit examinations. Examinations 1 and 2 will cover topics of Personal Survival Techniques and PPE. Examination 3 will cover topics of Fire prevention and Firefighting. Examination 4 will cover principals of watch standing – each exam could cover material from the previous exam.

The lecture segment will provide theoretical and practical knowledge to demonstrate competency in the topic areas. The laboratory segment (known as SeaLab) compliments the lectures by providing practical application of the theoretical and to develop the skills necessary to demonstrate proficiency. Lecture syllabus and laboratory schedules are included in this information package.

Methods of Demonstrating Competence

The methods chosen to carry out an evaluation will depend upon what the candidate is expected to achieve in terms of knowledge, comprehension and application of the course content.

The methods used may include:

- Direct observation and participation in classroom training.
- Oral examination a simple question-and-answer discussion with the candidate (either individually or as a group)
- Written test instruments prepared multiple choice tests requiring the selection of correct or best responses from given alternatives, the correct matching of given items, the supply of short fill-in answers, the supply of more extensive essay written responses to prepared questions or mechanical drawings and technical sketches.

- Practical demonstration where the course content is aimed at the acquisition of practical skills, the test may involve a practical demonstration by the candidate making use of appropriate equipment, tools, or simulation.

The responses demanded may therefore consist of:

- the recall of facts or information, by oral response or objective tests
- the practical demonstration of an attained skill
- the oral or written description of procedures or activities
- rendering technical drawings, diagrams or sketches of vessel components and/or systems
- the identification and use of data from diagrams, drawings, publications, charts, tables, etc.
- carrying out calculations to solve numerical problems
- the writing of an essay, journal, or technical report (i.e. workbook assignments)

Massachusetts Maritime Academy is committed to providing reasonable accommodations to students with documented disabilities. Students who believe they may need accommodations in this class are required to Dr. Elaine Craighead within the first two weeks of class at ecraighead@maritime.edu. Or visit her in the ABS office.

Examinations and Grading:

Lecture 75 % of total grade– minimum of 4 quizzes – 25% each

Lab 25% of total grade– minimum of 1 quiz (10%) / knot qualification (10%) / participation & attendance (5%)

Lecture portion (75% of total grade): A minimum of 4 quizzes/examinations will be administered during the lecture segments. The minimum passing grade on each quiz/exam is 70% for STCW certification. **Each student will be allowed (1) re-examination if they fail to meet the 70% minimum on a quiz/unit examination on the first attempt. Student retesting will only be conducted on Wednesday afternoons at 1600 – 1900. Students will be allowed to retest *only* after seeking help from the teacher during office hours or by an appointment for extra help. Failure to retest within a 2-week deadline will result in a failure of the exam, and ultimately, failure of the course. Deadlines for retesting will be posted on Blackboard and announced during Lecture periods.** Failure to achieve a passing grade in any one of the unit exams will result in failure of the course. Lecture examinations will be announced and given during a full lecture period

Laboratory (25% of total grade): In the laboratory (SeaLab), students should expect to be graded on a minimum of one written exam, and practical demonstrations of immersion suits, rowing, lowering/launching a survival craft, and knot qualifications – knot qualifications will be a graded practical exam. Examinations and quizzes may take the form of either multiple choice or short answers. If you are struggling with any portion of the laboratory, I strongly suggest seeking extra help from your instructors early. Both the lecture and laboratory instructors may give unscheduled quizzes at their discretion. Always carry a Number 2 pencil with you in class and in the Sealab.

An extra credit case study may be given in lecture.

Assessments:

The course has embedded STCW assessments which is a way for the USCG to determine you have the minimum required competency to perform duties on a vessel, and ultimately, go on the training cruise. As such, all students must pass STCW assessments to be eligible to go on cruise:

1. *Don an immersion suit.*
2. *Enter water while wearing an immersion suit.*
3. *Demonstrate ability to shift from prone to upright position while in the water wearing an immersion suit.*

Each student will have (2) opportunities to pass an assessment during the regular academic semester. If a student fails on the second attempt the student may receive an incomplete for the course until a third attempt can be made. If the student fails on the third attempt then a failure of the course will be given and the student must repeat the course – failure of the immersion suit STCW assessment will prevent the student from being able to go on the sea term.

Academic Alerts:

An Academic alert is a tool for the instructor to notify the student that they are either failing, almost failing, or for any other reason the instructor feels is concerning. If you receive an Academic alert it does not go on record to the registrar but serves as a warning and opens an opportunity for the student to communicate with the instructor.

Final Exam:

The final examination will be held during the final exam week in December. **The final examination will only consist of retake opportunities for candidates who failed the 4th quiz/examination.** A candidate who successfully passes the unit examinations on the first attempt will be exempt from that unit exam on the final examination week

Final Grade:

Quizzes, unit exams	75%
Sealab quizzes/(STCW/knot qual)	25%
	100%

The following is a breakdown of the final course grading:

93.0 – 100	A
90.0 – 92.9	A-
87.0 – 89.9	B+

83.0 – 86.9	B
80.0 – 82.9	B-
77.0 – 79.9	C+
73.0 – 76.9	C
70.0 – 72.9	C-
67.0 – 69.9	D+
63.0 – 66.9	D
60.0 – 62.9	D-
Below 60.0	F
Incomplete	I

Failure to complete laboratory STCW demonstrations for water entry with a survival suit will result in an incomplete (I) for the course until satisfied. A grade below C- will require a repeat of the entire course.

Attendance Policy

ATTENDANCE AT ALL CLASSES AND LABORATORIES IS MANDATORY. Cadets repeating this class must retake all sections and the laboratory. Unauthorized absence will not be tolerated. Disciplinary action and/or grade point reduction will be administered to repeat offenders. ***More than four (4) absences from classroom lectures and/or labs or a combination thereof for any reason will result in failure of the course.***

Instructors will dismiss cadets who are found sleeping in class and/or fail to bring required course materials (text book, class notes, etc.). Dismissal from class will be considered an absence for attendance purposes.

If absences occur due to illness, the student must notify the instructor as soon as possible for make-up works or assignments. The instructor must be informed of all special liberty well in advance of the respective date. Authorized absences must be reported to the instructor prior to the missed class. Make-up examinations for authorized periods of absence will be scheduled for a mutually agreed upon time.

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

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.

Classroom and Laboratory Policies

Cadets will wear the appropriate uniform of the day in lecture classrooms, and the issued uniform boiler suits while in the Sealab. Commuter students should wear clothing in the Sealab that will launder easily. ***Every cadet will bring their “Youngie” gear to all classes.*** Laboratories are conducted in all weather conditions. Always bring appropriate clothing, such as a warm jacket, as the fall progresses to winter, and rain gear if there is any chance of rain or snow. Cadets will not be excused from Sealab because of the

lack of a jacket or rain gear. Any USCG approved floatation coat (Floatcoat) may be substituted for Type-III approved PFD's during waterborne laboratories. Students may wear soft shoes (sneakers) while in the boats only.

- 1. Pocketknives are required at all times in the classroom and laboratories.**
- 2. Eating, drinking or the use of tobacco products is prohibited from all classes and laboratories.**
- 3. The use of cell phones is not allowed.**

LECTURE TOPICS
Introduction to Basic Safety
Principles of Survival
Emergency Situations
Survival Craft and Rescue Boats
Personal Lifesaving
Dangers to Survivors
Cold water Survival
Helicopter Ops.
Fire Equip/Classes/Agents
Fire preventions
Fire detection
Watch-standing

MT 1111L VESSEL FAMILIARIZATION LAB

- ❖ *Lab Sections are 2 hours each class*
- ❖ *Class will be taught by (2) Instructors*
- ❖ *Lab will encompass STCW assessment of Imm. Suits & STCW knot tying/splicing quals*

LAB 1

First Hour:

- ❖ *Intro to SEALAB Safety Rules, Policies, and Procedures*
- ❖ *Pass out manila 3 strandline/double braid line for 4/C*

Second Hour:

- ❖ *Pier lifeboat walk-thru – instructors to demonstrate procedures for launch/recovery*

LAB 2,3

- ❖ *Show and discuss the davit model in sealab – explain difference between open boat gravity davit and totally enclosed*
- ❖ *Launch/Recovery of a survival craft*
- ❖ *Review Release mechanisms*
- ❖ *Review parts of a lifeboat*
- ❖ *Review interior and exterior parts of pier lifeboat*
- ❖ *Discuss the function of tricing pendants, frapping lines, and sea painters*

Lab 4,5

- ❖ *Monomoys – handle a craft under oars*
- ❖ *Learn all rowing commands*
- ❖ *Prove proficiency as coxswain*

LAB 6

- ❖ *Show/discuss life raft launch/recovery procedures for automatic and manual deployment*
- ❖ *Discuss parts of a life raft and lifeboat – show students EPIRB, SARTS, SCT Radio their functions and how to operate them*
- ❖ *Show and discuss sea anchor*
- ❖ *Show and discuss pyrotechnics*
- ❖ *Show and discuss food & water rations – discuss how much food/water a person gets per day in a survival situation*

LAB 7

❖ Immersion suits

1. *learn how to don an immersion suit*
2. *learn how to safely enter the water*
3. *learn the help, huddle, and chain positions*
4. *learn to stay together as a group, using the back stroke to maneuver*
5. *learn how to enter a life raft*
6. *learn the use of thermal protection aids*

LAB 8,9,10

❖ Learn how to tie the following whippings, knots and splices:

1. *whipping, temporary*
2. *whipping, sailmakers*
3. *overhand knot or thumb knot*
4. *figure eight*
5. *square knot*
6. *bowline*
7. *French bowline*
8. *single becket bend*
9. *double becket bend*
10. *clove hitch*
11. *round turn and two half hitches*
12. *eye splice (three strand)*
13. *short splice (three strand)*
14. *back splice*

LAB 11

Waterfront tour of vessels at floats:

❖ Line handling 1

1. *identify lead/purpose of bow , breast and spring lines*
2. *identify...doubling up, bight, dipping the eye, on shore vs. off shore lead*
3. *point out three strand vs. eight strand construction*
4. *identify*
 - a. *bow*
 - b. *forecastle head*
 - c. *bridge*
 - d. *stern*
 - e. *for'castle deck, main deck, poop deck*
 - f. *bollard, cleat, chock (closed and roller type), bitt, fairlead, heaving line, hawser and stopper*
5. *make up and throw a heaving line, number to have on hand*

6. *fake line on deck (reverse flakes)*
 7. *use of a messenger*
 8. *method for tying heaving line to messenger, and messenger to hawser*
- **review knots/splices/whippings***

❖ Line handling 2

9. *line handling safety*
 - a. *dangers of standing in a bight*
 - b. *learning to pass hawser through bitts before paying out to create enough friction so that the hawser will not travel out wildly*
 - c. *fingers and pinch spots for ex. hawser/chock*
 - d. *use stopper not feet*
 - e. *danger zone for a parting line, stand clear in safe area when line is under strain*
- *****Review knots/splices/whippings***

LAB 12

❖ Practice Knot Qualification

LAB 13 QUALS & TEST

- ❖ *Marlinspike practical test on the tying of knots and splices.*
- ❖ *Verbal or written test on line nomenclature, knot uses, lifeboat/rowing commands, liferaft procedures etc.*

LAB GRADE

Average of SeaLab quizzes & knot qualification exam

100%