

ADVANCED MARINE FIRE FIGHTING

COURSE FRAMEWORK

Massachusetts Maritime Academy is an accredited four-year undergraduate program with a 118-year history of preparing mariners for careers in the maritime industry. Graduates of the Marine Engineering and Marine Transportation majors are awarded Bachelor of Science degrees as well as Third Mate/OICNW and Third Assistant Engineer/OICEW Unlimited USCG licenses and STCW certificates.

Massachusetts Maritime Academy's enrollment is nearing 1400 students. All freshmen (approximately 365 students) will earn an STCW-95 Basic Safety Training Certificate, of which Basic Marine Fire Fighting is a major component. Fifty-five percent of the remaining 1000 upper-class students will go on to complete Advanced Marine Fire Fighting.

SCOPE

Advanced Marine Fire Fighting (AFF) is structured as three 10-hour modules, which together with the 10-hour Basic Marine Fire Fighting, complete a 40-hour certification. Each of the three modules is designed to be taken in three years succeeding the Basic Marine Fire Fighting course.

Completion of the Advanced Marine Fire Fighting program will satisfy Section A-VI/1 and Table A-VI/1-2 of the STCW Code and 46 CFR 10.205(1)(2) and 10.205(g), 10.205(g)(1) for a license, as well as 46 CFR 13.113(d)(1)(i)(a), 13.113(e)(1)(i)(a) or (b), 13.201(e), 13.301(e), 13.401(d), 13.501(e) for an tankerman endorsement.

LEARNING OBJECTIVES

Sophomore Fire Fighting Module

1. Learns the basics of fire behavior.
2. Learns the principles of fire attack.
3. Learns the importance of PPE in fire fighting.
4. Reviews the basic firefighting equipment available onboard the TS Kennedy.
5. Demonstrates the proper donning of SCBA, including changing bottles.
6. Participates in extinguishing an interior Class A fire using standard hose techniques.
7. Demonstrates use of low-velocity fog to indirectly attack an interior fire.
8. Participates in extinguishing an interior galley grease fire using fixed and portable extinguishers, while demonstrating knowledge of sources of ignition.

Junior Fire Fighting Module

1. Gains an advanced knowledge of fire behavior.
2. Learns about the components, proper use, and hazards associated with fixed fire fighting systems aboard vessels.

3. Understands purpose and principles of ventilation.
4. Learns the principles in attacking fires in the engine spaces.
5. Demonstrates the proper donning of SCBA, including changing bottles.
6. Demonstrates ability to command a hose line to extinguish an interior Class A fire using standard hose techniques and proper ventilation.
7. Demonstrates ability to extinguish a Class B fire using foam and proper application techniques.
8. Demonstrates ability to extinguish a Class B fire using a 20-lb. dry chemical extinguisher.

Senior Fire Fighting Module

1. Students will gain an advanced knowledge of tactical hazards and techniques.
2. Understand the importance of drills, training and pre-planning of fire attacks.
3. Understand the basics of hazardous materials aboard ship.
4. Demonstrates proficiency in all aspects of testing, donning, doffing, and changing bottles of an SCBA.
5. Demonstrates the ability to work in a confined space, in black-out, while wearing an SCBA.
6. Demonstrates the ability to conduct search and rescue in an enclosed space.
7. Demonstrates the ability to command a hose line and act as team leader, while maneuvering hose lines throughout interior spaces.
8. Demonstrates the proper way to ventilate using fog.

ENTRY STANDARDS

Advanced Fire Fighting (AFF) will be available to any student who has completed Basic Fire Fighting.

CLASS SIZE AND STUDENT/TEACHER RATIO

The lecture portion of the class will be taught in a lecture hall setting. The practical portion of each class will consist of a maximum of 75 students broken up into groups of 25 students per three instructors.

The number of times that any scenario can be run without over-scheduling a training day will be taken into consideration when building the size of the practical classes.

INSTRUCTORS

This proposal requests that Massachusetts Maritime Academy be the administrators and record keepers of the training program. The program instructors will be comprised of USCG licensed personnel and firefighting training staff who have been trained to the Basic Firefighting and Advanced firefighting requirements under another approval (Northeast Maritime). Resumes of training staff are included as part of this submission.

Massachusetts Maritime Academy graduate Lt. Donald Chase of the Barnstable Fire Department will serve as liaison between the academy and the Barnstable staff (Director Lee Pareseau and Associate Director Mark Foley). Lt. Chase will coordinate scheduled of training and facilities as well as serve as an

instructor as necessary. He is not only a graduate, but presently teaches a three-credit course in Fire Dynamics as part of the undergraduate program offered by the academy. His combined years of professional fire service experiences along with his maritime background make him an ideal liaison for this program.

Record keeping for KUPs for the undergraduates will be kept with our Director of Licensing, CDR Marie Huhnke. Record keeping for our Division of Continuing Studies will be kept with of Director of Professional and Maritime Training, CDR Michael Burns.

TEACHING FACILITY AND AIDS

Massachusetts Maritime Academy is located on a 55 acre campus in Buzzards Bay, Massachusetts. The academy is fully accredited to offer undergraduate and graduate degrees through the New England Association of Schools and Colleges. The academy satisfies USCG requirements for eligibility for Third mate and Third Engineering licenses. The complex includes classrooms, labs, simulators, and dormitories to support 1200 full time undergraduates many of which are in a USCG licensing track program. The academy also has a Division of Continuing Education which provides professional training with a variety of USCG course approvals. The classroom training will be conducted on the Buzzards Bay campus in appropriate classrooms with fixed technology support.

The field training will be conducted at the Barnstable Fire Training facility located in Hyannis, Massachusetts. The travel time from the Buzzards Bay campus to the field facility is approximately 30 minutes. The Barnstable facility is presently approved to thorough the Northeast Maritime approval for firefighting training. The facility includes a Burn Building, shipboard compartment maze, confined space entry, propane burn trough, classroom and support structures (see figure 1).

MASSACHUSETTS MARITIME ACADEMY FIRE TRAINING SKILL EVALUATION SHEET

SOPHOMORE FIREFIGHTING

NAME: _____ **STUDENT ID:** _____

WRITTEN EXAM SCORE: _____ **GRADUATION DATE:** _____

LECTURE DATE: _____ **AND LECTURE CONTENT:**

P.P.E., Stages of Fire, Shipboard Fire Equipment and Fire Attack with Hose Lines

STATION

PASS/FAIL/INC

SCBA STATION:

- | | |
|---|-------------|
| A. Student demonstrates donning and doffing SCBA unassisted | [P] [F] [I] |
| B. Student demonstrates the ability to correctly change air cylinders | [P] [F] [I] |
| C. Student shows no problems or difficulties with all aspects of SCBA | [P] [F] [I] |
| D. Fail or Incomplete notations, Explain: | |
- _____
- _____

SHIPBOARD FIRE PRACTICAL EXERCISE:

- | | |
|--|-------------|
| A. Students demonstrated participating in a fire attack. | [P] [F] [I] |
| B. Students will sounded proper alarm prior to fire attack. | [P] [F] [I] |
| C. Student was a nozzle operator and controlled and extinguished fire with an all purpose nozzle. | [P] [F] [I] |
| D. Student, as #2 on hoseline, demonstrated proper overhaul skills. | [P] [F] [I] |
| E. Student, as #3 on hoseline, maneuvered hoseline to maintain an uninterrupted flow of water. | [P] [F] [I] |
| F. Student demonstrated the proper use of their P.P.E. | [P] [F] [I] |
| G. The student demonstrated proper procedures for personal rehab. including hydration and proper cool down procedures. | [P] [F] [I] |
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FLAMMABLE LIQUIDS STATION:

- A. Student selects proper extinguisher to fight a Class A & B fire. [P] [F] [I]
- B. Student shows ability to protect teammates by using a safety hoseline. [P] [F] [I]

FLAMMABLE GAS STATION:

- A. Student assists others in deploying 2 ½ inch hoselines to protect a fire team while shutting off the fuel supply to a pressurized liquid fire. [P] [F] [I]
- B. Students displayed proper hose handling techniques while participating in activity listed in "A" above. [P] [F] [I]
- C. Students displayed proper use of SCBA while participating in this exercise. [P] [F] [I]

This student has successfully completed the requirements for Sophomore Fire Training [Y] [N]

COMMENTS: _____

EVALUATOR: _____ DATE: _____

SIGNATURE: _____
