BOAT CREW MEMBER (BCM) COURSE OVERVIEW

About the Course

In accordance with the NASBLA Boat Operations and Training (BOAT) Program, the following outline provides a course of instruction to give maritime law enforcement and emergency responders a BASIC learning framework in order to become more proficient with skills necessary to operate in the maritime environment. A key element of this course will be the preparation of participants to become qualified in the tasks necessary for response to maritime safety, security, response and recovery operations, and Coast Guard/FEMA recognition in the national qualification database maintained by and through NASBLA.

The five day/35 hour course will focus on the basic elements in the following qualification areas, as listed in the U.S. Coast Guard's Boat Operations and Training Manual (Volume II) and **meet the national standards of training, qualification, credentialing and typing established in the NASBLA Boat Operations and Training (BOAT) Manual (Volume II)**:

Section	Subject Area
A	Crew Efficiency Factors, Risk Factors and Team Coordination
B	Physical Fitness, First-Aid, and Survival
C	Marlinespike Seamanship, Boat Nomenclature, Nautical Terminology, and Basic Stability
D	Boat Handling
F	Navigation
G	Mission-Oriented Operations

Course No. DHS-126-RESP in the FEMA NTED Catalog and Referenced in NFPA Standard 1670

Elements Not Covered in this Course

Because the course is a basic framework for necessary maritime operations, there are some elements that will not be covered in the class, yet are essential to the qualification and proficiency process. The following elements will not be covered, but are necessary for certification: Crew First Aid Responsibility (BCM-02-02-ANY,) Identify the different classes of fires (BCM-07-16-ANY,) Demonstrate the knowledge and operation of a CO2 and a Dry Chemical Fire extinguisher (BCM-07-18-ANY, BCM-07-19-ANY) and Section E: Communications.

References

Boat Crew Handbooks, COMDTINST M16114 (series)
Rescue and Survival Systems Manual, COMDTINST M10470.10 (series)
Navigation Rules International-Inland, COMDTINST M16672.2 (series)
Nautical Chart Symbols, Abbreviations, and Terms, Chart No. 1
The American Practical Navigator
Chapman Piloting
National Safe Boating Council Essentials of Close-Quarters Boat Control (Sept 2009)

Course Purpose

The BOAT Crew Member (BCM) Course, as part of the entire Boat Operations and Training (BOAT) Program, was created to establish a national standard of training, qualification, credentialing and typing of emergency responders throughout the maritime domain. It is the purpose of this course to establish basic understanding of maritime rescue operations, and provide the skills necessary to execute missions safely.

Secondly, and equally as important, it is the purpose of this course and the entire BOAT Program, to enhance the safety and response capabilities throughout the country, as graduates will be able to provide a true force-multiplier to the United States and the Coast Guard specifically.

Method of Delivery

The course is exportable and delivered to the location of the host agency and the venue of their choice. This allows students to practice in the area they operate in, and on the vessels they operate on. The course is delivered using "team teaching" as the model, where all instructors are engaged in every module within the course, so that students get multiple views and experiences to support and enhance the learning environment.

Criteria Performance Standard

Upon successful completion of the course, the student will demonstrate mastery of each of the objectives outlined in each module through a compilation of measures including objective testing, scenario review, class discussion, practical activities and homework.

Target Audience

This class is designed to provide federal, state, county, local and tribal emergency responders (firefighters, law enforcement officers, commercial tow operators, harbor masters, etc.) in the maritime domain a basic framework of knowledge and skills to perform missions on the water in a safe and efficient manner.

Course Structure

This course consists of instructor lecture, which will be aided (and assessed) by slide presentations, class interaction, practical exercises, a knowledge test and final exam. The instructor will emphasize student interaction and discussion throughout the course to ensure that the information taught is being understood and can be applied in a real-world environment.

Class Size/Student to Instructor Ratio

The minimum class size is 12 students, the maximum number is 20. Instructors for each class will meet a maximum of 4 students per instructor for each class (4 to 1 Student to Instructor Ratio.)

Course Requirements

Students will be required to bring appropriate foul weather gear for the area and time of the training, appropriate personal flotation device for the environment at the time of the training with consideration of air and water temperature, and appropriate clothing to conduct the exercises during the week. Additionally, agencies and departments will be required to provide a vessel for the students that will be attending (ideal ratio of one vessel for every 4 students) in order for them to learn how to apply the skills on the vessels that they will be operating on, and in their area of operation.

Facility Requirements

In order to deliver the course, a classroom area will have to be provided that will seat at tables up to 40 people. Additionally, the classroom will require a projector a screen, a whiteboard and/or easel boards with paper, writing instruments, power cords, sound speakers, bathroom facilities, and dock space for vessels in close proximity to the classroom.

Materials Provided

Each student will be provided a "Student Handbook" complete with every slide and some reference material they can use for future application. Additionally, students who would like copies of the modules will be allowed access to the "Instructor Portal" to facilitate the sharing of information. Within 30 days of completion of the course, students will be provided a certificate from NASBLA's National Headquarters in Lexington, KY and will be entered into the national database of trained BOAT Crew Members.

Course Cost

The fee for the five day/35 hour course is $32,000 for up to 20 students, and covers all instructor costs (travel, per diem, fees, etc.,) administrative costs (certificates, database entry, etc.,) and materials (student handbooks, practical exercise materials, etc.) The course fee on an individual student basis is $1800 with a minimum requirement of 12 students.

CONTACT INFORMATION:
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Course Breakdown

The following outline identifies the specific Crew Member Qualification tasks (found in the NASBLA BOAT Manual VOL II) that will be covered in this course.

Section A: Crew Efficiency Factors, Risk Factors and Team Coordination

Task Number	Task	Classroom	Practical
BCM-01-01-ANY	Crew Fatigue	.5	0
BCM-01-02-ANY	Motion Sickness	.5	0
BCM-01-03-ANY	Team Coordination Training (TCT)	3	0
	TOTAL	**4**	**0**

Section B: Physical Fitness, First Aid and Survival

Task Number	Task	Classroom	Practical
BCM-02-04-ANY	Don the Type III PFD	0	.5
BCM-02-07-ANY	Identify Boat Crew Survival Vest Equipment	.5	0
BCM-02-08-ANY	Use the Emergency Signaling Mirror	.5	.5
BCM-02-10-ANY	Demonstrate the Use of the ANY Illumination Signal Kit	.5	0
BCM-02-14-ANY	Don the Inflatable PFD	0	.5
BCM-02-16-ANY	List Survival Procedures in Event of Boat Capsize	1.0	0
BCM-02-17-ANY	Open Water Survival Skills	1.0	1.0
BCM-02-18-ANY	Perform Water Survival Exercise	1.0	2.0
	TOTAL	**4.5**	**4.5**

Section C: Marlinespike Seamanship, Boat Nomenclature, Nautical Terminology, and Basic Stability

Task Number	Task	Classroom	Practical
BCM-03-01-ANY	State Common Boat Nomenclature and Terminology	.5	0
BCM-03-02-ANY	Boat Characteristics – Boat Construction	.5	0
BCM-03-05-TYPE	Stability	.25	0
BCM-03-06-ANY	Identify the Different Parts of a Line and the Hitches Used in Line Handling	.5	.5
BCM-03-07-ANY	Tie Various Knots, Hitches, and Bends	1.0	.5
BCM-03-08-ANY	Secure Lines to Cleats, Bitts, and Posts	1.0	.5
	TOTAL	**3.75**	**1.5**

Section D: Boat Handling

Task Number	Task	Classroom	Practical
BCM-04-01-ANY	Rig Fenders to Side of the Boat	.25	.5
BCM-04-02-TYPE	Make Fast a Boat to a Pier (Bow On Mooring, No Current/Wind)	.25	.5
BCM-04-03-TYPE	Assist in Anchoring the Boat	.25	.5
BCM-04-04-TYPE	Assist in Weighing the Boat's Anchor	.25	.5
BCM-04-05-ANY	Identify the Common Navigation Lights Displayed by Ships and Boats	1.0	0
BCM-04-06-ANY	Identify the Common Sound Signals Used by Ships and Boats	1.0	0
BCM-04-07-ANY	Identify and Describe Accepted Maritime Distress Signals	.25	0
BCM-04-08-ANY	Stand a Lookout Watch	.25	.5
BCM-04-09-ANY	Act as a Helmsman and Steer a Compass Course	.25	.5
BCM-04-10-TYPE	Get the Boat Away from a Pier/Cutter	.5	.5
BCM-04-11-TYPE	Moor the Boat to a Pier/Cutter	.5	.5
BCM-04-12-TYPE	Boat Handling	1.0	1.0
	TOTAL	**5.75**	**5**

Section F: Navigation

Task Number	Task	Classroom	Practical
BCM-06-01-ANY	Identify the Symbols, Abbreviations and Basic Parts of a Nautical Chart	.25	0
BCM-06-02-ANY	Identify Common Aids to Navigation Used for Inland and Coastal Piloting	.25	.5
BCM-06-03-ANY	Identify Local Landmarks on a Nautical Chart	.25	.5
BCM-06-04-ANY	Plot a Position Using Latitude and Longitude	1.0	.5
BCM-06-05-ANY	Plot a Magnetic Course on a Nautical Chart	1.0	.5
BCM-06-06-ANY	Measure Distance on a Nautical Chart	1.0	.5
BCM-06-07-ANY	Compute Time, Speed, and Distance	1.0	.5
BCM-06-08-ANY	Determine the Depth of Water Using a Fathometer, Depth Sounder	.25	.5
BCM-06-09-TYPE	Use Radar to Identify Objects	.5	.5
BCM-06-10-TYPE	Determine the Range and Bearing to Objects Using Radar	.5	.5
BCM-06-11-TYPE	*Use Radar to Obtain and Interpret Relative Bearings and Ranges to a Moving Target to Determine if Risk of Collision Exists	.5	.5
	TOTAL	**6.5**	**5**

Section G: Mission Oriented Operations

Note: * if equipment is available on the platforms used for training.

Task Number	Task	Classroom	Practical
BCM-07-01-TYPE	Participate in a Man Overboard Evolution as a Pointer	.5	.5
BCM-07-02-TYPE	Participate in a Man Overboard Evolution as a Recovery/Pickup Person	.5	.5
BCM-07-09-ANY	*Bend a Heaving Line to a Bridle and Pass the Heaving Line to Another Boat	.5	.5
BCM-07-10-TYPE	*Pass a Towline to Another Boat	.5	.5
BCM-07-11-ANY	*Connect a Towline to a Trailer Eyebolt Using a Shackle or Skiff Hook	.5	.5
BCM-07-12-TYPE	Secure an Alongside Tow	.5	.5
	TOTAL	**3**	**3**

Total Classroom Hours: 27.5. Total Practical or On the Water Hours: 19

Total Course Hours: 46.5. Targeted Delivery with overlapping subject areas: 40 Hours

Course Schedule and Modules Stated in Performance Terms

DAY ONE ----------

- Morning (Classroom) Course Introduction

  Module 1: Overview (2 Hours)
  Learning Objectives:

  a) *The purpose of this module is to outline the basic framework under which maritime operations will be conducted, through the establishment and implementation of NASBLA's Boat Operations and Training Program.*
  b) *Students will learn that through this program and this course in particular, all maritime responders can literally and figuratively, be working together and off the same fundamental framework.*
  c) *It will explain how, ultimately, with more trained professionals on the water and operating in concert, more lives will be saved.*

  Module 2: Crew Efficiency, Risk Factors, and Team Coordination (2 Hours)
  Learning Objectives:

  - *By the end of this module, the student will be able to demonstrate an understanding of steps that can be taken to identify, evaluate, mitigate and manage risks that should be considered in every maritime operation.*

  Enabling Objectives:

  a) *Explain what factors can impact a team's ability to perform a mission in the maritime domain*
  b) *Explain what TCT is.*
  c) *Explain what the five critical skills are to reduce the probability of human error.*
  d) *Identify tools that can help assess and manage risk.*
  e) *Be able to identify behaviors and actions that can increase situational awareness and decrease the likelihood of poor judgement.*

- Afternoon (Classroom for Module, Outdoors for Practical)

  Module 3: Seamanship (2 Hours)
  Learning Objectives:

  By the end of this module, students will be able to understand unique marine terms, definitions and nomenclature, and understand basic line handling skills necessary to operate vessels safely in the maritime domain.

  Enabling Objectives:

  a) *Understand and be able to state common boat nomenclature and terminology.*
  b) *Identify key boat characteristics and boat construction.*
  c) *Understand and be able to explain concepts of boat stability.*
  d) *Identify different parts of a line and handling techniques used to secure lines to cleats, bitts and cleats.*

  Practical Exercise (on vessels, classroom if weather restricted)
  Students will perform Knot tying in Team Speed and Precision Drills (2 Hours)

- Evening (Homework): Conduct a Risk Assessment on a Real "Sea Story."

DAY TWO ----------

- Morning (Classroom and Vessels)
  Review Homework
  Module 4: Water Survival (4 Hours)
  Learning Objectives:
  – *This module will examine the environmental threats and hazards first responders will face in the maritime domain, what to be aware of, and how to mitigate those threats and survive when faced with those hazards after suddenly and unexpectedly thrown into the water.*

  Enabling Objectives:
  a) Explain the different types of survival equipment and the importance of having survival gear.
  b) Be able to list survival procedures in the event of a boat capsize.
  c) Explain the risks involved when operating in the maritime environment and how to mitigate those risks.
  d) Explain and demonstrate open water survival skills.

  Module 5: Close Quarters Maneuvering (2 Hours)
  Learning Objectives:
  Building upon the foundational elements from the previous modules, students will learn the principles of environmental elements, and how they affect the maneuverability of a vessel in tight quarters, in the event that they find themselves in these conditions and responsible for operating the vessel safely.

  Enabling Objectives:
  a) Demonstrate the ability to control a boat in tight spaces (close quarters).
  b) Understand and demonstrate knowledge of terms used in describing boat maneuvers.
  c) Demonstrate the ability to recognize environmental conditions that may affect boat maneuverability, and use those conditions to your advantage.
  d) Understand and safely demonstrate the four basic control skills: steering control, shifting gears, boater's eye, wind and current awareness.

- Afternoon: Practical on the water (4 hours)
  Students will practice boat maneuvering drills, docking and line commands.

DAY THREE ----------

- Morning (Classroom)
  Module 6: Rules of the Road, Watch Standing, Anchoring (2 Hours)
  Learning Objectives:
  From a crew member perspective, students will learn basic, yet critical elements to boat operations including navigational lights, sound signals, handling skills and anchoring techniques in order to safely operate in the maritime environment.

  Enabling Objectives:
  a) Demonstrate line handling skills in order to moor a boat to a pier and to get underway.
  b) Identify common navigational lights displayed by vessels.
  c) Identify common sound signals used by vessels, and their meaning.
  d) Understand the responsibilities of standing a lookout watch.
  e) Assist in anchoring and weighing a boat's anchor.
  f) Identify and describe accepted maritime distress signals.

Module 7: Mission Oriented Operations (2 Hours)
Learning Objectives:
This module will bring all of the previous modules together, and will focus on actual mission specific tasks and performance of those tasks. The module targets three specific areas where a student's skills will be most likely used: Rescuing someone in the water, towing, and extinguishing a small fire.

Enabling Objectives:
a) Participate as a pointer, as a recovery/pick-up person and/or as a Surface Swimmer in a Man Overboard Evolution
b) Bend a heaving line to a Bridle or Tow Line and pass the heaving line to a disabled or anchored boat
c) Connect a tow line to a trailer eye bolt
d) Identify different classes of fires, fuel sources and extinguishing agents
e) Demonstrate knowledge of the operation of a CO2 and a dry chemical fire extinguisher

- Afternoon: Practical on the water (4 Hours)
Students will practice man overboard recovery, anchoring, alongside towing, and team coordination throughout those evolutions.

DAY FOUR ----------

- Morning (Classroom)
Review

Module 8: Navigation (3 Hours)
Learning Objectives:
As responders in the maritime environment, students will learn a critical element of their operations and develop a basic foundation of navigational skills and knowledge, allowing them to identify aids to navigation, to utilize a nautical chart as a tool, and to properly calculate course, distance, time and speed between points.
Enabling Objectives:
a) Be able to identify the Symbols, abbreviations and basic parts of a Nautical Chart.
b) Demonstrate the ability to plot a position using latitude and longitude.
c) Demonstrate the ability to plot a Magnetic Course on a Nautical Chart.
d) Be able to measure Distance on a Nautical Chart.
e) Be able to compute Time, Speed & Distance.

- Afternoon: Practical Exercises
Students will conduct Navigational and Towing Drills

DAY FIVE ----------

- Morning (Practical Exercise, on the water)
Students will be given scenarios that they will have to respond to. All of the scenarios will require Risk Assessment, Team Planning and Coordination, Navigation, Lookout Watches, Boat Handling, Line Handling Commands, Radio Communications, Pointer and Recovery Responsibilities.
    - Scenario One: Person in the Water at a pre-determined location.
    - Scenario Two: Vessel in Distress at a specific location
    - Scenario Three: Person at a marina needing medical assistance
- Afternoon: Review, Final Exam and Evaluations

NOTE: Course Schedule is subject to change at each delivery and is dependent on weather, facility, platform, equipment, circumstances and/or student complications, and left to the discretion of the Lead Instructor.