

## **Maritime-Basic Officer's Course**

**LOS ANGELES COUNTY SHERIFF'S DEPARTMENT**

**LOS ANGELES PORT POLICE DEPARTMENT**

***MARITIME OFFICER'S TRAINING INSTITUTE***

**"Basic Maritime Officer's Course"**

**80 hours**

### **Day One**

0800-0900 Registration & Introduction (Classroom)

- Complete forms
  - Registration
  - Waivers
- Staff & student introductions
- Course overview
- Review of safety guidelines for the course

0900-1100 Basic Boating (Lecture - Classroom)

- Nomenclature/Nautical Terminology
  - Nautical vs. commonly used terms
- Vessel Types

- Power (inboard/outboard/jet)
- Sail (Sloop, Ketch, Schooner)
- Commercial Vessels
  - Passenger (Cruise Ships)
  - Container Ships
  - Tankers
  - Bulk Carriers
- Hull Types
  - Displacement
  - Planing
  - Mono, catamaran, trimaran
- Vessel documentation & recognition
  - Federal/state and local laws regarding vessel recognition and identification of vessels operating in the U.S.
  - Documentation and registration requirements
  - ID lights and shapes for all vessels.
  - ID sound and light signals.
- Safety and emergency equipment commonly carried on law enforcement vessels
  - Uniforms
  - Web gear
  - Weapons
  - Ballistic shields
  - Medical Equipment
  - Binoculars
  - Radiation pagers
  - Four gas meters
  - Personal Protective Equipment (hats, gloves, sunglasses, sunscreen, etc.)

1100-1200 Lunch

1200-1400 Vessel Inspection (Practical - Docks)

- Pre-operational checks
  - Inspection Checklist
  - Maintenance

- Necessary tools
- Lights
- Fueling
  - Electrical system off
  - Engine compartment open
  - Inspect bilge for odor/fuel
- Post operational checks

1400-1700 Swim Assessment, PFD's, and Environmental Risks (Practical - Pool)

- Swim test
  - 100 yards any style
  - 25 yards underwater
  - Treading water for 10 minutes (weighted)
  - Floating
  - Self rescue
- PFD's
  - Type I "Offshore Lifejacket"
  - Type II "Near Shore Buoyant Vest"
  - Type III "Flotation Aid"
  - Type IV "Throwable Device"
  - Type V "Special Use Device"
- Environmental protections/risks and hazards of exposure in a marine environment/environmental risk assessments and mission planning
  - Weather
  - Hypothermia
  - Sea life

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## Day Two

0800-0830 Review & Critique (Docks & Classroom)

0830-0930 Environmental Stresses (Lecture – Classroom)

- Current and Wind
  - Effects on maneuvering
  - Working into the current and/or wind
  - Vessel power and steering input
  - Effects on differing types of vessels
  - Mooring on the leeward side
  - It's all about control, not speed!

0930-1200 Navigation Rules – Parts A & B (Lecture – Classroom)

- Part A – General
  - Application
  - Responsibility
  - Definitions
- Part B – Steering and Sailing Rules
  - Conduct of vessels in all visibility conditions
  - Conduct of vessels in sight of one another
  - Conduct of vessels in restricted visibility

1200-1300 Lunch

1300-1400 Weather Warning System (Lecture – Classroom)

- Types of warnings
  - Small craft
  - Gale
  - Storm
  - Hurricane

- Criteria for each warning
- Sources for weather information
- Characteristics of weather systems

1400-1500 Hazardous Material Response (Lecture – Classroom)

- Make your observations from a safe distance.
  - Be mindful of current and wind conditions
- Communicate the information to appropriate authorities.
  - Dispatch/communications center, fire department, port authorities, and USCG.
- Contain the problem if possible.
  - Request resources
  - Prevent additional people/vessels from entering the affected area.
  - Boom deployment
- Notify appropriate authority for clean up.
- Documentation
  - Required reports

1500-1700 Emergency Fire Fighting (Lecture/Practical – Classroom/Dockside)

- Primary areas/causes aboard ships
  - Engine room (oil leaks, bearing overheating, etc.)
  - Galley (appliances, grease)
  - Spontaneous ignition (cargo, waste, etc.)
  - Hot work (welding, cutting, etc.)
  - Electrical apparatus (short circuit, non-professional repairs)
- Characteristics
  - Class A, B, C, and D fires
- Appropriate extinguishing agents
- Use of portable extinguishers
- Damage control
- Personal protective equipment
  - Turnout gear

- SCBA's (Self Contained Breathing Apparatus)
- Natural vs. man-made clothing

### **Day Three**

0830-1000 Review & Critique (Classroom)

0830-1000 Marlinspike Seamanship (Practical – Docks)

- Difference in lines
- Care and maintenance of lines
- Knots
  - Bowline
  - Cleat Belay
  - Sheet Bend
  - Clove Hitch

1000-1200 Basic Seamanship (Lecture – Classroom)

- Handling
  - Drive types
  - Throttle control
  - Anchoring during prevailing wind and sea conditions
  - Characteristics of good seamanship
- Towing vessels
  - Stern tow
  - Side tow
- Anchoring
  - Types of anchors
  - Scope
  - Techniques

- Damage control/emergency repairs
  - Vessel flooding
  - Electrical problems
  - Mechanical problems

1200-1300 Lunch

1300-1400 Electronics and E-Navigation (Lecture – Classroom)

- Global Positioning System (GPS)
  - Identify the three components
  - How does it work?
  - Plot a chart position from GPS information
  - What kinds of information can it provide?
  - Electronic Navigation Accuracy Verification
  - Setting up and storing routes
- Radar and Chartplotting
  - How does a radar work?
  - What are the basic controls?
  - What are the positioning capabilities of a radar unit?
  - Operational functions of a radar
  - Operational functions of an integrated GPS/Chartplotter

1400-1700 Vessel Maneuvering & Electronics (Practical – Docks)

- Low speed handling
  - Prop and steering (use together)
  - Twin screw vs. single
  - Backing
  - Docking, properly secure a vessel to a dock or pier
  - Jet drive handling characteristics
- GPS, Radar, and VHF
  - Basic functions

- Anchoring

## Day Four

1200-1300 Docking Practice & Critique (Docks & Classroom)

1300-1600 Navigation (Lecture – Classroom)

- Charts
  - Latitude & longitude
  - Depth/datum
  - Symbols
  - Locating structures, objects, landmarks
  - Charting a course
- Aids to Navigation (ATON)
  - Identify the purpose of an aid to navigation
  - Identify the purpose of beacons, buoys, and the appliances used on aids to navigation
  - Lateral system of buoyage

1600-1700 Dinner

1700-2100 Night Operations (Practical – Docks & Underway)

- Patrol Vessel
  - Size
  - Type
  - Lighting
- Vessel Identification & Maneuvering
  - Lights
  - Sounds

- Signals
- Safety Underway
  - Night vision
  - Lookout responsibility
  - Speed
  - Hazards
  - ATON
- Use of navigational equipment and electronics
  - Compass
  - Chart Plotter
  - Radar
  - Sonar
  - Radio Direction Finder (RDF)
  - Communications
- Personal equipment

## **Day Five**

0800-0830 Review & Critique (Classroom)

0830-1200 Trailering, Launch, & Recovery (Practical – Launch Ramp)

- Trailer operation
  - Towing dynamics
  - Safety/failure
  - Tow vehicle ratings
  - Hitch types & ball sizes
- Trailer/vessel inspection
  - Pre-operations check
  - Inspection sheet
  - Maintenance
  - Fueling
- Maneuvering the trailer

- Launching the vessel
  - Bilge plug
  - Disconnects
  - Pre-start checklist
  - Check the water depth
  - Back down until vessel floats
  - Visual inspection of drive unit
  - Start vessel
  - Back off trailer and secure to dock
  - Rinse trailer, park, and secure tow vehicle
- Recovering the vessel
  - Back to proper depth
  - Slowly maneuver vessel onto trailer using bunks as guides
  - Secure bow to winch
  - Slowly pull trailer & vessel out of water
  - Remove bilge plug
  - Secure tie-downs
  - Check light operation

1300. Lunch

1300-1500 Navigation Rules – Parts C & D (Lecture – Classroom)

- Part C – Lights and Shapes
  - Application
  - Definitions
  - Power Driven Vessels
  - Towing & Pushing
  - Sailing Vessels
  - Vessels Constrained by Their Draft
  - Pilot Vessels
- Part D – Sound and Light Signals
  - Definitions
  - Equipment
  - Maneuvering & Warning Signals

- Restricted Visibility Signals
- Signals to Attract Attention
- Distress Signals

1500-1700 Enforcement Stops (Practical – Underway)

- Tactical considerations
  - Officer safety
  - Vessel approach
  - Crew responsibilities
  - Sea/weather conditions
  - Vessel/equipment limitations
- Boardings & Inspections
  - Officer safety
  - Crew isolation
- Arrest techniques
- Vessel pursuits

## Day Six

0800-0930 Mid-Term & Critique

0930-1030 Patrol Missions (Lecture – Classroom)

- Routine patrol
  - Agency specific roles
  - Port security
- Boater assistance
  - Vessel towing
  - Marine Assistance Radio Broadcast (MARB)

- Search and rescue
  - Search patterns
  - Communication
  - Capsizing
  - Helicopter evacuation
  - Victim rescue
- Body recoveries
- Special operations

1030-1200 Patrol Missions (Practical – Underway)

- Search and rescue
  - Search patterns
  - Communication
  - Use of navigational equipment

1200-1300 Lunch

1300-1700 Patrol Missions (Practical – Underway)

- Vessel Towing
- Special Operations
  - Search for surface and subsurface intruders
  - Maneuver a vessel to engage a hostile vessel with deadly force
  - Clearing fields of fire
- Safety & security zones

## **Day Seven**

0800-0830 Review & Critique (Classroom)

0830-1000 Boating Law (Lecture – Classroom)

- Discuss the most frequently used codes from the:
  - H and N code
  - Vehicle code
  - Title 13 and 14
  - Penal Code
  - Fish and Game Code
  - LA County Code
  - Local ordinances
- Reasonable suspicion for vessel stops and searches

1000-1200 Piloting and Dead Reckoning (Lecture – Classroom)

- Four types of navigation
- Three dimensions or problems of navigation
- Solving time, speed, and distance problems
- Compass error
- Navigation tools
- Fixing a geographic position and relative position on a chart
- Plot and label a Dead Reckoning course

1200-1300 Lunch

1300-1700 Navigation (Practical – Underway)

- Students will be asked to demonstrate their proficiency with the following:
  - Chart a course using the chartplotter
  - Identify ATONS while en route
  - Identify an object/vessel on their radar

- Utilize sonar to determine water depth

## Day Eight

1200-1230 Review & Critique (Classroom)

1230 -1600 Navigation & Righting a Vessel (Practical – Underway)

- Students will plot and navigate a course to Marina Del Rey
  - Charting a course using a paper chart
  - Charting a course using the on-board electronics
  - Maintaining a compass heading
- Students will participate in a vessel righting exercise
  - A small sailing vessel will be used

1600-1700 Lunch

1700-2100 Night Operations (Practical – Underway)

- Review of safety practices underway (returning from Marina Del Rey)
  - Night vision
  - Lookout responsibility
  - Speed
  - Hazards
  - ATON
- Review of navigational equipment and electronics
  - Compass
  - Chart Plotter
  - Radar
  - Sonar

- Radio Direction Finder (RDF)
- Communications
- Review of Vessel Identification & Maneuvering
  - Lights
  - Sounds
  - Signals

## **Day Nine**

0800-0830 Review & Critique

0830-1030 Investigations (Lecture – Classroom)

- Boating Under the Influence (Lecture – Classroom)
  - PAS Device
  - Field Sobriety Test
  - Applicable Codes
- Vessel Accident
  - Reportable incidents
  - Report forms

1030-1230 Chartplotting Practice (Practical – Classroom & Dockside)

- Students will practice paper and electronic charting.

1230-1330 Lunch

1330-1700 Search & Rescue (Practical – Underway)

- Search patterns
- Victim recoveries
- Man overboard approaches
- Body recoveries
- Self-Rescue, Throw Bags & Rings, Floating, Cold Water

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## Day Ten

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0800-1200 Water Survival (Practical – Pool)

- Resistive Victims & Combative Suspects
  - Students will be shown how to overcome the resistance of a combative suspect or resistive victim in a water environment.

1200-1300 Hosted Lunch

1300-1500 Final Exam Review

1500-1700 Final Exam & Critique

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