



ASA 101: Basic Sailing Curriculum

Pre-study is vital to the success of your course. There will be two tests for this course, one written and one skills. Please study the material outlined below so that you will be prepared at the time of your course and will be able to concentrate on the principles taught by the instructor.

We recommend going through each standard (listed below and set by the American Sailing Association), under the “Knowledge” section, looking up in the text and review, as this will streamline your learning. The “Skills” portion will be taught on the boat.

Prerequisites: None, just a desire to learn to sail.

Description: ASA 101, Basic Sailing

Able to skipper a sloop-rigged keelboat of approximately 20 to 27 feet in length by day in light to moderate winds (up to 15 knots) and sea conditions. Knowledge of basic sailing terminology, parts and functions, helm commands, basic sail trim, points of sail, buoyage, seamanship and safety including basic navigation rules to avoid collisions and hazards. Auxiliary power operation is not required.

KNOWLEDGE

Basic Sailing Terminology

1. Describe and identify the following sailboat parts and their functions:

- | | | |
|------------------------|-----------------------|-------------|
| ▪ Hull | ▪ Rudder | ▪ Lifeline |
| ▪ Deck | ▪ Cockpit | ▪ Pulpit |
| ▪ Transom | ▪ Cabin | ▪ Winch |
| ▪ Keel | ▪ Standing Rigging | ▪ Cleat |
| ▪ Mast | ▪ Shroud | ▪ Block |
| ▪ Boom | ▪ Spreader | ▪ Fairlead |
| ▪ Gooseneck | ▪ Chainplate | ▪ Fender |
| ▪ Bow | ▪ Headstay / Forestay | ▪ Docklines |
| ▪ Stern | ▪ Backstay | |
| ▪ Helm / Tiller /Wheel | ▪ Stanchion | |

2. Identify and describe the functions of the following sails, sail parts and sail controls:

- | | | |
|---------------|---------|-------------------------|
| ▪ Mainsail | ▪ Clew | ▪ Downhaul / Cunningham |
| ▪ Jib / Genoa | ▪ Foot | ▪ Batten |
| ▪ Head | ▪ Luff | ▪ Batten Pocket |
| ▪ Tack | ▪ Leech | ▪ Bolt Rope |

- Hank
- Running Rigging
- Halyard
- Mainsheet
- Jibsheets
- Boom Topping Lift
- Boom Vang
- Telltale
- Outhaul
- Traveler
- Shackle
- Roller Furler

3. Define the following terms:

- Port
- Starboard
- Forward
- Aft
- Beam
- Ahead
- Astern
- Abeam
- Windward
- Leeward
- Draft
- Freeboard
- Heel
- Weather helm
- Skipper
- Helmsman
- Crew

Maneuvers & Points of Sail

4. Explain and identify using diagrams the following maneuvers, points of sail, and other terms:

- Head-to-Wind
- No-Sail Zone
- Closed Hauled
- Close Reach
- Beam Reach
- Broad Reach
- Run
- Sailing-by-the-Lee
- In Irons
- Luffing
- Port Tack
- Starboard Tack
- Tacking
- Jibing
- Stand-on
- Give-way

5. Explain and utilize correctly the following helm commands and crew responses:

- "Heading Up"
- "Bearing Away"
- "Ready About" — "Ready" — "Helms a-Lee" (or "Coming About" or "Tacking")
- "Prepare to Jibe" — "Ready" — "Jibe-Ho" (or "Jibing")

Navigation Rules

For items 6 through 12, describe, using diagrams as appropriate, the applicable rules for a 25-foot recreational sailing vessel, as found in the *USCG Navigation Rules and Regulations Handbook*. Identify the "stand-on" and "give-way" vessel in each situation.

- 6.** Look-out, Rule 5.
 - 7.** Sailing vessels with the wind on different sides (starboard / port), Rule 12(a)(i)
 - 8.** Sailing vessels with the wind on same side (leeward / windward), Rule 12(a)(ii)
 - 9.** Sailing vessel on port tack cannot determine windward sailing vessel's tack, Rule 12(a)(iii)
 - 10.** Overtaking (Rule 13)
 - 11.** Power-driven vessels approaching each other head-on (Rule 14)
 - 12.** Power-driven vessel with another power-driven vessel on starboard side (Rule 15)
 - 13.** Describe appropriate actions to be taken when sailing in the vicinity of commercial traffic, including responding to a danger signal.
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Aids to Navigation

- 14.** Identify and state the purpose of lateral aids to navigation by color, shape & numbering, including preferred channel markers.
 - 15.** Identify safe water, information and regulatory markers.
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Safety Gear & Procedures

16. List the federally required equipment for a recreational sailboat of 25-feet in length.
 17. Identify the location and color of navigation lights used by a recreational vessel of 25-feet in length.
 18. Describe the purpose of a Float Plan, give examples of information contained therein and to whom it should be submitted.
 19. Describe when and to whom boating accidents must be reported.
 20. State the Federal Blood Alcohol Content (BAC) limit for vessel operation.
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SKILLS

Safety Equipment

21. Demonstrate the proper use of a lifejacket or personal flotation device (PFD).
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Sailing

A Certified Sailor has successfully demonstrated his or her ability to:

Rig/hoist/set sails safely and correctly to obtain proper sail trim using the following lines and controls, *if available* on the practice vessel

- | | |
|-------------------------------------|--|
| 22. Halyards and/or furling devices | 27. Jibsheets |
| 23. Downhaul or Cunningham | 28. Winches |
| 24. Outhaul | 29. Traveler |
| 25. Boom Vang | 30. Lower/furl/stow sails and coil/flake/stow lines properly |
| 26. Mainsheet | |

Without coaching or assistance, verbalize appropriate commands and demonstrate competence, safety and good seamanship in the role of Skipper / Helmsman during the maneuvers listed in elements 31 – 42. Honor all aids to navigation and use properly the basic *Navigation Rules*. Ensure sails are trimmed correctly and the vessel is in control at all times.

31. Depart dock or mooring fully ready to get underway safely
32. Select and maintain a given tack and course
33. Demonstrate how to get out of "irons"
34. Head Up
35. Bear Away
36. Sail Close Hauled
37. Sail on a Close Reach
38. Sail on a Beam Reach
39. Sail on a Broad Reach
40. Sail on a Run
41. Tack
42. Jibe
43. As crew, give appropriate verbal responses and perform correct actions during the maneuvers listed above

Crew Overboard

44. Describe and demonstrate the correct actions to be taken while under sail from the time a person falls overboard until safely recovered.
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Return & Secure

45. Return to dock or mooring
 46. Secure vessel, using appropriate mooring/dock lines, fenders, etc.
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Knots

Describe the purpose of, and construct without assistance in a timely manner, each of the following knots and hitches:

- 47.** Figure-8 Knot
- 48.** Square (Reef) Knot
- 49.** Clove Hitch
- 50.** Round Turn & 2 Half Hitches
- 51.** Cleat Hitch
- 52.** Bowlin



ASA 103: Basic Coastal Cruising

Pre-study is vital to the success of your course. There will be two tests for this course, one written and one skills. Please study the material outlined below so that you will be prepared at the time of your course and will be able to concentrate on the principles taught by the instructor.

We recommend going through each standard (listed below and set by the American Sailing Association), under the “Knowledge” section, looking up in the text and review, as this will streamline your learning. The “Skills” portion will be taught on the boat.

Prerequisites: Basic Sailing (ASA 101) certification and the ability to demonstrate competencies in all knowledge and skill elements of that standard.

Description: ASA 103, Basic Coastal Sailing

Able to skipper a sloop-rigged keelboat of approximately 25 to 35 feet in length by day in light to moderate winds (up to 20 knots) and sea conditions. Knowledge of cursing sailboat terminology, basic boat systems, auxiliary engine operation, docking procedures intermediate sail trim, navigation rules, basic coastal navigation, anchoring, weather interpretation, safety and seamanship.

KNOWLEDGE

Cruising Sailboat Terminology

1. Identify and describe the following cruising sailboat parts, areas, or systems and their functions:
 - Turnbuckle
 - Chainplate
 - Stemhead Fitting
 - Rudder Post
 - Transom
 - Compass
 - Binnacle
 - Cockpit Locker
 - Emergency Tiller
 - Saloon
 - Companionway
 - Galley
 - V-berth
 - Auxiliary Engine
 - Bilge
 - Bilge Pump
 - Seacock
 - Ground Tackle
 - Windlass
 - Hatch
 - Through-hull Fitting
 - Self-bailing Cockpit

Safety Equipment & Procedures

2. List the federally required equipment for a 33-foot recreational vessel equipped with an inboard diesel engine.
3. Describe the characteristics and benefits of Personal Flotation Devices (PFD's), both Wearable (Life Jackets) and Throwable.
4. List the ASA recommended safety equipment for a recreational sailing vessel.
5. Describe ways to keep gear and equipment secure and in their proper location.
6. Describe the purpose and proper use of a safety harness and tether.
7. Describe safe refueling procedures for a vessel equipped with an outboard engine using gasoline or a diesel engine using diesel fuel.

Navigation & Weather

- 8.** Demonstrate understanding of basic coastal navigation terminology and practices, including
- Essential navigator's tools
 - Use of navigation charts and symbols
 - Depth soundings
 - Bottom types
 - Hazards
 - Aids to navigation
 - Latitude / Longitude
 - Determining magnetic direction
 - Measuring distance
- 9.** Describe how to prevent undue magnetic influence on a compass.
- 10.** Describe the dangers of, and how to avoid, a 'lee shore.'
- 11.** Obtain and interpret marine weather information; describe the impact that present observations and forecasts may have on sailing plans for the next 6 -12 hours.
- 12.** Describe and identify Cumulonimbus clouds and what dangers they may signify.
- 13.** Define 'small craft advisory' and 'gale warning' and describe precautions to be taken for each.
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Sail Plan

- 14.** Describe the appropriate sail combinations to carry under the following wind conditions: light (0-11 knots), moderate (12-19 knots), and heavy (20-33 knots).
- 15.** Describe the procedures for reducing sail using a roller furling jib and a mainsail reefing system.
- 16.** Describe the benefits of, and procedures for, heaving-to.
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Seamanship

- 17.** Describe the primary responsibilities of skipper and crew.
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For elements 18 – 23, describe, using diagrams as appropriate, the applicable rules for a 33-foot recreational sailing vessel, as found in the *USCG Navigation Rules and Regulations Handbook*:

- 18.** Proceeding at a safe speed (Rule 6), determination of collision risk (Rule 7), and taking early and substantial action to avoid collision (Rule 8).
- 19.** Sailing vessels (Rule 12), overtaking (Rule 13), and power-driven vessels in head-on (Rule 14) and crossing (Rule 15) situations.
- 20.** Give-way and Stand-on vessels (Rules 16 & 17).
- 21.** Location, color and illumination angles of required navigation lights at anchor, under sail, and under power.
- 22.** Actions to be taken when operating a vessel in restricted visibility such as fog or haze including adaptation of speed and use of sound signals.
- 23.** Basic maneuvering and warning signals (short and prolonged whistle blasts) for inland waters.
- 24.** Describe the appearance and purpose of the 'Diver Down' and 'Alpha' flags.
- 25.** Describe common anchor types, major considerations for anchorage selection, and proper scope for short term and overnight anchoring as well as storm conditions.
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Emergencies

- 26.** Describe the three stages of hypothermia; name symptoms and treatment for each.
- 27.** Describe two methods for getting a person out of the water and safely back on board the vessel.
- 28.** Identify common sources and prevention of fires and/or explosions, as well as appropriate actions to be taken if these situations arise. Describe different types of fires and procedures for operating a fire extinguisher.
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29. Describe immediate actions to be taken when the following urgent situations arise:

- Cabin filling with water
- Failed steering system
- Fouled propeller
- Failed running or standing rigging
- Dragging anchor
- Grounding at anchor
- Running aground under sail
- Engine Failure

SKILLS

Preliminaries

- 30.** Locate and examine for compliance the vessel's federally required and ASA recommended safety equipment.
 - 31.** Demonstrate on shore or aboard the vessel the correct method for putting on a life jacket while in the water.
 - 32.** Identify the vessel's battery selector switch and power distribution panel and ensure all switches are in the proper position for getting underway.
 - 33.** Ensure navigation lights (sidelights, stern light, steaming light, and anchor light) operate properly.
 - 34.** Perform a radio check using a working channel on the VHF radio.
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Navigation

- 35.** Visually pilot the training vessel in and out of a harbor, correlating nautical chart symbols to actual landmarks and aids to navigation.
 - 36.** Steer a compass course (+/- 5 degrees) under power for a minimum of five minutes.
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Under Power

- 37.** Visually inspect the auxiliary engine and demonstrate safe engine starting, operating, and stopping procedures. Demonstrate proper gearshift and throttle usage.
 - 38.** Ensure vessel & crew readiness and depart dock or slip smoothly and under control.
 - 39.** Approach a mooring buoy (or other mark as a simulation if no mooring available); stop the vessel within boathook reach; attach the vessel to the mooring using an appropriate line or bridle; cast off from the mooring and get underway.
 - 40.** Set a bow anchor in water depth 8 feet or greater, using correct procedures including hand signal communication, vessel maneuvers, safety in handling ground tackle, and proper operation of windlass (if equipped). Anchor should hold with engine in reverse gear at one-half throttle. Raise anchor and get underway smoothly using correct procedures.
 - 41.** Describe and demonstrate the correct actions to be taken while under power from the time a person falls overboard until safely recovered.
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Under Sail

- 42.** Hoist or unfurl sails correctly using halyards and / or furling devices. Describe the effect on sail trim or performance while adjusting each of the following lines and controls (if available on the practice vessel):
 - downhaul or cunningham
 - outhaul
 - boom vang
 - mainsheet
 - traveler
 - jibsheets
 - jibsheet fairleads
 - Discuss ways to reduce heeling.
 - 43.** Demonstrate correct winch operation, including safety considerations for line tension / breakage, hand / finger position, winch handle insertion / removal, and clearing overrides.
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Without coaching or assistance, verbalize appropriate commands and demonstrate competence, safety and good seamanship in the role of Skipper / Helmsman during the maneuvers listed below. Honor all aids to navigation and use properly the Navigation Rules. Ensure sails are trimmed correctly and the vessel is in control at all times. Adjust sail controls appropriately as the vessel's heading changes and wind / sea conditions evolve.

- 44.** Get out of 'irons' then select and maintain a given tack and course.

- 45.** Head Up, Tack, Bear Away, and Jibe while pausing briefly at each of the following points of sail: Close Hauled, Close Reach, Beam Reach, Broad Reach, and Run (with sails "wing on wing").
- 46.** Heave-to and get sailing normally again.
- 47.** While underway, reduce sail area by reefing mainsail and genoa; then shake out reef.
- 48.** As crew, give appropriate verbal responses and perform correct actions during the maneuvers listed above.
- 49.** Describe and demonstrate the correct actions to be taken while under sail from the time a person falls overboard until safely recovered.
- 50.** Lower and/or furl all sails and coil or flake and stow all lines properly.

Return to Dock/Slip

- 51.** Ensure vessel / crew readiness and use the auxiliary engine to bring the vessel smoothly and under control to a stop next to a parallel dock or into a slip; secure the vessel using appropriate lines and fenders.
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Knots

- 52.** Describe the purpose of, and construct without assistance and in a timely manner, each of the following knots:
 - Figure-8
 - Square (Reef) Knot
 - Clove Hitch
 - Round Turn & 2 Half Hitches
 - Cleat Hitch
 - Bowline
 - Sheet Bend
 - Rolling Hitch



ASA 104: Bareboat Cruising Certification

Pre-study is vital to the success of your course. There will be two tests for this course, one written and one skills. Please study the material outlined below so that you will be prepared at the time of your course and will be able to concentrate on the principles taught by the instructor.

We recommend going through each standard (listed below and set by the American Sailing Association), under the “Knowledge” section, looking up in the text and review, as this will streamline your learning. The “Skills” portion will be taught on the boat.

Prerequisites: Basic Sailing (ASA 101) and Basic Coastal Cruising (ASA 103) certification and the ability to demonstrate competencies in all knowledge and skill elements of those standards.

Description: ASA 104, Bareboat Cruising Certification

Able to skipper a sloop-rigged, auxiliary powered keelboat of approximately 30 to 45 feet in length during a multi-day cruise upon inland or coastal waters in moderate to heavy winds (up to 30 knots) and sea conditions. Knowledge of provisioning, galley operations, boat systems, auxiliary engine operation, routine maintenance procedures, advanced sail trim, coastal navigation including basic chart plotting and GPS operation, multiple anchor mooring, docking, health & safety, emergency operations, weather interpretation, and dinghy/tender operation.

KNOWLEDGE

Cruise Planning

- 1.** Describe appropriate clothing and personal gear to pack for safety and comfort during a one-week cruise.
- 2.** Describe the required documents and procedures for customs and immigration when cruising to a foreign port of entry.
- 3.** Plan a menu and create a provisioning list for a one-week cruise.
- 4.** Describe the symptoms and first aid treatments for hypothermia and heat exhaustion / heat stroke.
- 5.** Describe the causes, prevention and treatments for seasickness.
- 6.** Describe the tools and spare parts that should be on board for a one-week cruise.
- 7.** Describe variables that affect fuel consumption and cruising range under power, and calculate range based on average fuel consumption.
- 8.** Describe the minimum daily water requirements for all personnel on board as well as methods to conserve fresh water.

Systems

- 9.** Describe safe galley procedures to minimize dangers such as fire, scalding, and spillage.
- 10.** Describe proper marine toilet operation, including precautions to prevent malfunction, and describe proper holding tank pump-out procedures.
- 11.** Identify and describe the function of the fundamental systems and components of a marine diesel engine, including fuel, lubrication, cooling, and drive train.
- 12.** Describe safe fresh water tank filling procedures, including identification of correct deck fills.

13. Describe power conservation measures and procedures to prevent running batteries down when anchored/moored overnight.

Emergencies

14. Name four acceptable distress signals, per the *USCG Navigation Rules and Regulations Handbook*, which are appropriate for a recreational vessel.

15. Describe actions to be taken in the following situations:

- Collision with another boat
- Running aground
- Dragging Anchor
- Flooding
- Fire

16. Describe actions to be taken in the following situations when the vessel is under power:

- Fouled Propeller
- Engine cooling water fails to flow
- Engine fails in a crowded anchorage where using sails is not possible
- Engine fails in a busy channel

Seamanship

17. Describe the information required and the procedure for tying a boat to a fixed dock in areas with a large tidal range.

18. Describe the following multiple-anchor mooring procedures and their purposes:

- Fore & Aft Moor
- Forked Moor
- Bahamian Moor
- Mediterranean Moor

19. Describe methods and potential dangers of rafting vessels at anchor.

20. Describe safe methods for towing and securing a dinghy / tender.

21. Describe preparation of the vessel for heavy weather sailing including gear stowage, crew safety and appropriate sail plan.

22. Describe the following courtesies and customs:

- Permission to board
- Permission to come alongside
- Courtesy in crossing adjacent boats when rafted
- Rights of first boat in an anchorage
- Keeping clear of regattas
- Flag etiquette
- Rendering assistance to vessels in distress

23. Describe, using diagrams as appropriate, the applicable rules (steering & sailing, lights, and sound signals) for a 30' to 45' recreational vessel, as found in the *USCG Navigation Rules and Regulations Handbook*.

Navigation & Weather

24. Explain and identify the following coastal navigation terms, using a chart or diagrams as appropriate:

- | | |
|-----------------|-------------|
| ▪ Speed | ▪ Heading |
| ▪ Time | ▪ Bearing |
| ▪ Distance | ▪ Fix |
| ▪ Tidal Range | ▪ True |
| ▪ Tidal Current | ▪ Magnetic |
| ▪ Track | ▪ Variation |
| ▪ Course | ▪ Deviation |

- Line of Position (LOP)

25. Describe the sea breeze and land breeze dynamics and their effect on sailing conditions.

26. Identify conditions that may lead to the formation of radiation and sea / advection fog.

27. Describe actions to be taken in the following weather situations:

- Fog / reduced visibility
- Squall / thunderstorm

SKILLS

General

28. Perform the duties of skipper and crew on a live-aboard coastal cruise of at least 48 hours

29. Locate and check the condition of all federally required equipment.

Systems

30. Perform a routine vessel inspection, ensuring that all systems and equipment are in working order, including:

- Fuel level
- Fresh water level
- Battery voltage
- Electrical system
- Navigation lights
- Instruments and electronics
- Bilge
- Through-hulls and seacocks
- Standing rigging
- Running rigging
- Deck hardware
- Ground tackle

31. Visually inspect the auxiliary engine. Check for correct engine oil level and potential problems such as leaking fluids or frayed belts; demonstrate safe engine starting, operating and stopping procedures.

32. Inspect the raw water strainer for debris and ensure that the raw water intake seacock is in the proper position for engine operation.

33. Locate the emergency steering tiller and identify where it attaches to the rudder post.

34. Operate the electric and manual bilge pumps to ensure they are functional.

35. Demonstrate proper usage of the VHF radio, including hailing another station on Channel 16 and switching to a working channel.

36. Demonstrate proper operation of the galley stove including fuel supply, lighting, and shutting down; simulate the proper way to extinguish a galley fire.

37. Demonstrate the proper method of disconnecting and reconnecting shore power cables.

Under Power

38. Demonstrate the use of spring lines in the docking/undocking process (e.g., pivoting the vessel away from the dock during departure).

39. Maneuver the vessel in reverse gear, observing and explaining the effect of prop walk on the stern's direction.

40. Maneuver the boat in a confined space to include performing 'standing turn' maneuver, turning the vessel 180 degrees in a confined area using rudder position and gearshift / throttle control.

41. Ensure vessel / crew readiness and use the auxiliary engine to bring the vessel smoothly and under control to a stop next to a parallel dock or into a slip; secure the vessel using appropriate lines and fenders.

42. Describe/demonstrate an appropriate person in water (a.k.a. Man Overboard or MOB) recovery maneuver while under power and describe methods to bring the MOB safely back aboard.

43. Demonstrate one of the following multiple-anchor mooring methods as appropriate to local conditions, using correct procedures such as hand signals, safety in handling ground tackle, proper operation of windlass (if equipped) and use of a snubber or bridle. Raise anchors and get underway smoothly using correct procedures.

- Fore and Aft Moor
- Forked Moor
- Bahamian Moor
- Mediterranean Moor

Under Sail

44. Sail a steady compass course within +/- 10 degrees with sails trimmed properly.

45. Demonstrate the proper use of all available lines and sail controls (halyards, sheets, traveler, boom vang, outhaul, downhaul/cunningham, jib sheet fairleads, etc.) to obtain maximum performance and comfort.

46. Demonstrate the correct usage of a jibe preventer.

47. Demonstrate proper reefing procedures while under sail or hove-to.

48. Demonstrate two different MOB recovery maneuvers while under sail; starting from both close-hauled and a broad reach and selecting an appropriate maneuver for each initial point of sail.

Navigation & Weather

49. Plan a coastal passage from origin to destination, plotting courses, distances, and waypoints. While en route, keep a written log and plot DR positions on a chart, and calculate estimated times of arrival (ETA) to waypoints.

50. Obtain and interpret marine weather information; describe the impact that the present observations and forecast may have on cruising plans over a 3-day period.

51. Obtain updated weather forecasts during a passage and compare with visual and measured observations.

52. Take visual 2 or 3-bearing fixes using a hand-bearing compass.

53. Determine the predicted depth above or below chart datum at a given time using tide prediction tables.

54. Use a GPS / chartplotter (if available) to obtain information and perform basic navigation functions such as position, course, speed, waypoints, ETA, and tidal information.

55. Pilot a boat into an unfamiliar harbor or anchorage by day using relevant nautical charts, publications and tidal information.

Knots

Describe the purpose of and construct each of the following knots (without assistance and in a timely manner):

- Figure-8 Knot
- Square (Reef) Knot
- Clove Hitch
- Round Turn & 2 Half Hitches
- Cleat Hitch
- Bowline
- Sheet Bend
- Rolling Hitch
- Trucker's Hitc

