



Intermediate Cruising Standard (ASA 104)

Prerequisites: Basic Keelboat Sailing (ASA 101) and Basic Coastal Cruising (103) Certification

General Description: Demonstrated ability to skipper a sloop-rigged, auxiliary powered keelboat (or catamaran, if course is conducted on such) 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. Course is conducted as a live-aboard cruise of at least 48 hours. 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.

SAILING 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. Determine the fuel tank capacity of the training vessel, describe variables that affect range under power, and calculate the range based on average fuel consumption.
8. Determine the fresh water capacity of the training vessel. Describe the minimum daily water requirements for all personnel on board and methods to conserve fresh water.

Systems

9. Describe safe galley procedures to minimize the danger of fire, scalding, spillage, etc.
10. Describe proper marine toilet operation, including precautions to prevent malfunction.
11. Describe proper holding tank pump-out procedures.
12. Describe safe fresh water tank filling procedures, including identification of correct deck fills and cautions to be observed near a pump-out station.
13. Describe power conservation measures and procedures to prevent running batteries down when anchored/moored overnight.

Emergencies

14. Name four acceptable distress signals, as listed in the *Navigation Rules*, 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
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 (bow and stern anchors)
 - Forked Moor (two anchors set 45 to 90 degrees apart at the bow)
 - Bahamian Moor (two anchors set 180 degrees apart at the bow)
 - Mediterranean Moor (anchor set off the bow with stern to a dock)
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 and apply Rules 1 through 19 from *Navigation Rules, International - Inland*.

Navigation & Weather

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

Speed	Track	Fix
Time	Course	True
Distance	Heading	Magnetic
Tidal Range	Bearing	Variation
Tidal Current	Line of Position (LOP)	Deviation



25. Describe the sea breeze and land breeze effects.
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
 - Heavy squall

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.
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 crew overboard recovery method while *under power*. Describe methods to bring COB safely back onboard.
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 compass course (+/- 10 degrees) with sails trimmed properly.
45. Demonstrate the proper usage of all lines and sail controls (halyards, sheets, traveler, boom vang, outhaul, jibsheet fairleads) that are available on the training vessel to obtain maximum performance and comfort.
46. Demonstrate the correct usage of a jibe preventer.
47. Demonstrate proper reefing procedures (jiffy reefing or in-mast furling as appropriate for the training vessel) while under sail or hove-to.
48. Demonstrate *two* appropriate crew overboard recovery methods while *under sail*; options include the Quick-Stop, Figure-8 and Broad Reach/Close Reach methods. Begin from both close-hauled and a broad reach and select the most appropriate maneuver for the 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 log and a DR plot 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 sailing plans over the next three days.
51. Update weather forecasts during your passage, verify through 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 so equipped) 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	Clove hitch	Round turn & 2 half hitches	Cleat hitch
Truckers hitch	Rolling hitch	Sheet bend	Bowline

THIS CONCLUDES THE 104 BAREBOAT CHARTERING STUDY GUIDE

Cruising Catamaran Standard (ASA 114)

Prerequisites: Basic Keelboat (ASA 101) and Basic Coastal Cruising (ASA 103). The Bareboat Charter Standard (ASA 104) is also a prerequisite and can be attained either by itself prior to BBC Multihull (ASA 114). In either case, all material in both standards (ASA 104 & 114) must be taught and tested before 114 can be awarded.

General Description: An advanced cruising standard for individuals with cruising experience. The individual can act as skipper and crew of a 30-50 foot multihull sailboat by day in coastal waters. The standard includes those skills unique to a 30-50 foot multihull.

SAILING KNOWLEDGE

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

1. Identify and describe the following hardware/terms:

Bridgedeck	Cabin	Three point rig
Bridle-line	Catamaran	Crossarms
Float	Full wing deck	Open wing deck
Partial wing deck	Galley down	Galley up
Hull(s)	Main hull	Multihull
Safety nets	Seagull striker	Dolphin striker
Stability	Stability Curves	Trimaran
Wing deck	Bridgedeck	Cabin

2. Discuss the advantages and disadvantages to operating a multihull sailboat.
3. Describe the weight carrying characteristics of 30-50 foot cruising multihulls and how weight distribution affects safety and performance.
4. Describe the differences in performance between multihulls and monohulls of about the same size.
5. Describe the accommodations of a typical 30-50 foot multihull and how comfort and safety will differ from a monohull.
6. Identify differences in ships systems between multihulls and monohulls.
7. Describe shoal draft and its effect on planning ahead and sailing.
8. Describe the danger of capsizing, how to recognize the danger and how to prevent it.





9. Discuss the characteristics of a multihull which determine windage and the effects of windage on course and speed.
10. Discuss how multihull design affects turning radius.
11. Describe a typical center/daggerboard installation on a multihull and how they affect performance.
12. Describe options for gear stowage and proper stowing procedures.
13. Describe how and where a safety harness tether would attach to a multihull.
14. Discuss the various sail combinations and how they affect balance of a multihull.
15. Discuss the differences of multihull heavy weather sailing practices (advantages and disadvantages) including the following:
 - Lying ahull
 - Sea anchors
 - Heaving-to
 - Running off and standing on
 - Speed controls
16. Describe and discuss the methods of rafting multihulls and the limitations involved.
17. Discuss the limitations of a multihull galley and methods of working safely in the galley.
18. Discuss auxiliary power options on a multihull.
19. Discuss engine placement on a multihull and its affect on performance and comfort.
20. Discuss common mechanical maintenance on a multihull.
21. Discuss common mechanical repairs on a multihull.
22. Describe and discuss what to do if one or both engines fail.
23. Describe options for carrying and towing a dinghy.
24. Describe the method of tying a multihull securely to a dock in areas of varying tidal range.

SAILING SKILLS

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

Boat Handling Under Power

25. Cast off and safely leave a dock with at least two different wind directions relative to the bow (i.e., wind across the stern and wind across the beam).
26. Stop the bow of the boat within four feet of a marker while maneuvering under power. Perform the exercise upwind, downwind and with the wind across the beam.
27. Maneuver the boat under power in a confined space, noting the effects of wind and current.
28. Maneuver the boat within 2 feet of, and parallel to a dock. Define and carry out a bail-out plan.
29. Turn the boat in the tightest possible circle to determine its turning radius. Twin screw boats will perform the exercise with screws turning in opposite directions and again with screws turning in the same direction.
30. Repeat item 29 turning the boat in the opposite direction and compare the differences between both turns.
31. Repeat items 29 and 30 while making stern way (going backwards).
32. Steer a straight course of at least 10 boat lengths in reverse using moderate speed.



33. If the boat used for certification is equipped with two engines, repeat items 30-31 using one engine then the other.

34. Steer a multihull using an emergency steering device.

- Moving forward on a steady bearing
- Moving backward on a steady bearing
- Moving forward on a figure 8 course

Person Overboard

35. Demonstrate a skipper's actions and commands while under power from the time a member of the crew falls overboard without warning until the crew is safely recovered.

36. Describe at least two methods of getting a person out of the water and back on board a multihull.

Boat Handling Under Sail

Points of Sail

37. Function as helmsman and crew giving correct commands and proper responses while demonstrating the proper techniques of close hauled sailing, reaching (all three points), running, tacking and jibing, heading up, bearing away and luffing while noting the differences and likenesses of sailing a multihull vs. monohull.

38. Sail an ordered compass course for 5 minutes without varying more than 10 degrees from the heading.

39. Sail a figure 8 course between two buoys noting acceleration/deceleration times and momentum during turns.

40. While sailing at full power, luff sails and observe how long it takes for a multihull to come to rest.

41. Trim luffing sails noting how long it takes to accelerate to full power.

Person Overboard

42. Demonstrate a skipper's actions and commands while under sail from the time a member of the crew falls overboard without warning until the crew is safely recovered.

- Use two different return techniques including the quick-stop method

Heavy Weather

Points of Sail

43. Reduce sail by reefing and shaking out a reef while keeping the vessel under control and on course.

44. Heave-to and get underway again, noting the vessel's motion at different angles to the wind.

45. Sail with mainsail only, then headsail only noting performance characteristics and limitations.

Anchoring

46. Use proper anchoring techniques to anchor using the following methods:

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- Two anchors off the bow or stern (Bahamian style)
- Single bow anchor and bridle
- Single bow anchor and stern to the beach (Med style)
- Bow to permanent mooring with bridle (if available)
- Beaching with consideration of daggerboard/centerboard, rudder and hull mounted electronics. (optional)

Making fast and Snugging Down

47. Secure a boat to various dock configurations so as to provide limited movement and set out fenders correctly. Take extra precautions to secure a vessel for the night at a dock and at a mooring.

This concludes the ASA114 study guide