



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