



ASA 105 - Coastal Navigation

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. Bareboat Cruising certification (ASA 104) or equivalent experience, plus additional cruising experience.

Description: ASA 105, Coastal Navigation

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. Able to apply the navigational theory and practices for safe navigation of a sailing vessel in coastal and inland waters.

KNOWLEDGE

Charts and Navigation

1. Explain the chart symbols and conventions on U.S nautical charts in accordance with the terminology of Chart #1.
2. Identify a source of official U.S. Coast Guard navigation publications.
3. List the publications required for prudent navigation in the local area including:
 - Large scale charts of the area and Chart #1
 - Federal Requirements for Recreational Boats
 - *USCG Navigation Rules and Regulations Handbook*
 - State small vessel regulations
 - Local rules and regulations, if applicable
 - Local cruising guides
 - Tide and current tables, (paper or electronic)
 - List of lights, buoys, and fog signals
4. Describe the instruments required for prudent navigation in the local area including the following minimum requirements:
 - Steering compass and deviation table

- Handbearing compass and / or pelorus
- Binoculars
- Protractor or parallel rule
- Depth sounder or leadline
- Pencil, eraser, and notebook
- Dividers
- Watch or clock
- Log / Knotmeter

5. Describe the purpose and example contents of a "Notice to Mariners."

6. Explain the terms and characteristics used for lighted navigation aids.

7. Explain the significance of shapes, colors, and lights used in the U.S. Aids to Navigation (ATON) system.

SKILLS

8. Use the tide and current tables to find:

- Times and heights of tides at reference and secondary ports.
- Direction and rate of current at referenced and secondary stations.

9. Convert courses and bearings between true, magnetic, and compass.

10. Check compass deviation by a transit bearing or other means.

11. Plot a dead reckoning position on a chart using speed, time and course to steer.

12. Allow for the effect of current and leeway to plot the estimated position.

13. Determine a course to steer which takes into account known current and leeway.

14. Determine current given the course steered and speed and two observed positions.

15. Plot a chart position from terrestrial objects using:

- Two or more bearings on different objects taken at one time.
- Bearings at different times (i.e. a running fix).
- One bearing and transit range.
- One distance (i.e. a sounding or dipping a light) and one bearing.

16. Chart a course of at least 20 miles and three course changes using the above skills.
