BASIC COASTAL NAVIGATION STANDARD

Standard Description

This introductory Standard covers a basic knowledge of navigation theory and is the initial Standard in a comprehensive set of Standards offered by Sail Canada on vessel navigation. The curriculum covers the role of the navigator and introduces the publications, aids to navigation and tools and techniques that support planning and safe passage making. The student is exposed to basic plotting and position determination methods. This Standard covers information key to the effective use of electronics.

Sessions complement material introduced in courses leading to the Sail Canada Basic Cruising and Basic Powerboating Standards. The concepts and skills covered will be applied in courses leading to the Intermediate Cruising and Intermediate Power Standards and prepares candidates for the Sail Canada Intermediate Coastal Navigation Standard.

A course leading to this Standard course should be offered and evaluated in not less than 15 hours of classroom sessions.

Objective

To be able to plan and to safely navigate by day in Canadian coastal and inland local waters.

Prerequisites

None.
PCOC Recommended.

Ashore Knowledge

The candidate must be able to:

1. Describe the navigator's role and responsibilities including appraisal, planning, execution and monitoring position.

2. Explain the chart symbols and conventions on Canadian Hydrographic charts, in accordance with the terminology of *Chart 1, Symbols, Abbreviations and Terms*.

3. Identify a source of official Canadian government navigation publications.

4. List the publications required by regulation as well as those needed for prudent navigation in the local area and demonstrate their purpose, including the following minimum requirements:
   a) Large scale charts of the area and *Chart 1, Symbols, Abbreviations and Terms;*
   b) *Sailing Directions;*
   c) *Tide and Current Tables;*
   d) *Current Atlas;*
   e) *Collision Regulations;*
   f) Local rules and regulations;
   g) *List of Lights, Buoys, and Fog Signals;*
   h) *Radio Aids to Marine Navigation;*
   i) *Safe Boating Guide;*
   j) *Canadian Aids to Navigation.*

5. Describe source and purpose of *Notices to Mariners (NOTMAR)* and *Navigational Warnings (NAVWARNs).*

6. List and describe or demonstrate the use of tools required for prudent navigation including:
   a) Hand-bearing compass;
   b) Steering compass and deviation table;
   c) Depth sounder and lead line;
   d) Log/knot-meter;
   e) Dividers;
   f) Protractor, plotter or parallel rule;
   g) Watch or clock;
   h) Pencil/eraser/note book.

7. List factors affecting depth above or below chart datum in tidal and non-tidal waters.

8. Use the *Tide and Current Table, Current Atlas* or chart embedded tables to find:
    a) Times and heights of tides at reference and secondary ports;
    b) Direction and rate of current at reference and secondary stations;
    c) Rate and direction of current at a specific location using tidal diamonds.or a Current Atlas.

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

10. Plot:
    a) A dead reckoning (DR) position from a known position given speed, time, and course;
    b) A position fix based on two or more bearings on different terrestrial objects taken at one time;
    c) A position fix based on one bearing and a transit range based on terrestrial objects;
    d) Danger and clearing bearings.

11. Given one or more planned legs and estimated speed, determine to the nearest minute:
    a) Estimated time of arrival (ETA);
    b) Revised ETA.

12. Recognize day and night appearance and meaning of the Canadian Aids to Navigation System (lateral, cardinal, special buoys; and daybeacons).

13. Use charts and publications to prepare a basic pilotage plan for a daytime trip including:
    a) Harbour entry and exit;
    b) Waypoints, rhumb line course, heading (in compass), distance, and ETA;
    c) Use of aids to navigation enroute;
    d) Consideration of water depth, current, weather, and other local factors and hazards.

14. With reference to a global navigation satellite system (GNSS) such as *GPS (Navstar), Beidou, Glonass or Galileo* explain:
    a) Explain the basic operation of a GNSS enabled device to determine position;
    b) List factors that affect the accuracy of positions given by a GNSS enabled device;
    c) Identify common GNSS enabled applications for navigation and cautions concerning their usage.

15. Describe the types of information that may be included in a vessels log.

16. Use Sail Canada Uniform Navigation Symbols and Terms for plotting and labelling.

Outcomes and Evaluation

You can attain this Standard by achieving a minimum of 70% on the Sail Canada Basic Coastal Navigation Examination. Performance on the written exam will be reviewed with the candidate.

Successful candidates will be awarded the Basic Coastal Navigation standard and the certification will be noted in the candidates Sail Canada Logbook. Certification is complete when the logbook is signed by the evaluating instructor(s) and a seal affixed, and when the candidate status is updated in the Sail Canada data base. Student certification is good for life.

Additional Notes

Students that have completed Basic Coastal Navigation may further develop their skills by taking training leading to the Sail Canada Intermediate Coastal Navigation Standard or Intermediate Cruising Standard.

Over time student skills may weaken and updates to training to refresh and build skill are recommended.

Physical Requirements for Candidates

None.

Further Information

For further information on navigation training contact your Provincial Sailing Association or Sail Canada.

Resource Material

Basic Coastal Navigation Notes, Exercises and Appendices, Author: Jamie Gordon,
    Exercises available for charts 9997IC (Ontario) or 4237 (Halifax)

Basic Coastal Navigation, Author: Gillian West, exercises for chart 3463 (British Columbia)

Coastal Navigation, Author: Dominique Prinet, exercises for chart 3463 (British Columbia)