

OFFSHORE STANDARD

Course Description

An offshore passage is defined as a voyage exceeding 100 miles from the nearest land and is navigated by celestial and electronic means without visual reference to terrestrial objects.

This live-aboard course develops the sailors' ability to take command of and effectively operate a sailing vessel day or night in an extensive range of possible weather conditions while making extended offshore ocean passages. Students will be provided the opportunity to manage the vessel as skipper and crew under sail and power while making a continuous passage of more than 500 nautical miles.

This course builds on the skills developed in the Sail Canada Start Keelboat Sailing, Basic Cruising, Intermediate Cruising and Advanced Cruising courses as well as the Celestial Navigation and Advanced Navigation courses. Candidates are expected to be able to competently demonstrate the skills developed in those courses.

It is envisioned that the program will be taught in a minimum six days to adequately cover all the performance objectives.

Objective

To be able to safely act as skipper and crew in a sailing cruiser on an offshore passage requiring celestial navigation.

Prerequisites

Requirements prior to taking the standard:

- Sail Canada Advanced Cruising standard,
- ROC(M) VHF with DSC endorsement,
- Recognized Standard First Aid and CPR certificate,
- Sail Canada Celestial Navigation and Advanced Navigation standards.

Requirements for certification:

- Sail Canada Offshore Personal Survival Course.

Ashore Knowledge

Section I: Passage Planning

The candidate must be able to:

1. Plan a passage across the North Atlantic or Pacific and to be able to state the advantages, disadvantages and hazards of various routes. *Ocean Passages for the World*, *World Cruising Routes*, Climatic Charts, Great Circle Plotting Charts, plotting instruments, etc, may be used;
2. Plot a series of rhumb lines on a mercator chart to approximate a great circle route;
3. List the publications required for prudent navigation on an offshore passage to include the following:
 - a) Coastal charts and publications,
 - b) *Nautical Almanac*,
 - c) Sight reduction tables,
 - d) Plotting sheets,
 - e) Work sheets,
 - f) Pilot charts,
 - g) *Ocean Passages for the World* or *World Cruising Routes*.

Section II: Voyage Preparation

The candidate must be able to:

4. State the essential factors to be considered when selecting the vessel:
 - a) Displacement,
 - b) Hull shape,
 - c) Keel,
 - d) Rudder,
 - e) Rig,
 - f) Sails,
 - g) Interior layout,
 - h) Fuel capacity,
 - i) Water capacity,
 - j) Engine / machinery;
5. List items to be carried to effect minor repairs to vessel and rigging;
6. Describe items required to prevent chafing;
7. Describe three methods of self steering, their advantages and disadvantages;

8. List items necessary to repair sails;
9. Plan meals for a minimum of four people for a seven day passage;
10. Describe:
 - a) Proper methods of preserving and storing food,
 - b) The expected storage life of all food;
11. State the factors to be considered when selecting the crew:
 - a) Health,
 - b) Compatibility,
 - c) Experience/competence,
 - d) Attitude,
 - e) Capability;
12. Describe suitable clothing for the voyage;
13. State source of obtaining advanced first aid information;
14. Identify and describe the basic treatment of potential medical problems;
15. List the items to be carried in the first aid kit;
16. Describe methods of preventing injury to the cook or nearby persons while cooking at sea;
17. Prepare and file a passage plan.

Section III: Ship Board Routines

The candidate must be able to:

18. Describe 3 watch keeping systems and their application, advantages and disadvantages;
19. Describe alternate watch keeping arrangements in the event that crew is incapacitated;
20. Describe the duties of the crew on watch and off watch;
21. Establish a routine schedule to periodically inspect and maintain the following items:
 - a) Bilges,
 - b) Sea cocks,
 - c) Heads,
 - d) Hatches,
 - e) Galley and supplies,
 - f) Rigging,
 - g) Helm,
 - h) Electronic Equipment,
 - i) Safety Equipment,
 - j) Fuel and Water,
 - k) Engine / Machinery;
22. Set up a routine schedule for the cleaning of the vessel.

Section IV: Emergency Procedures

The candidate must be able to:

23. Describe how to rig a trailing crew overboard line with an alarm;
24. Describe an alternative method of alerting the crew to a crew overboard situation. State what other emergency situation to which you would limit the use of this device;
25. Describe what action should be taken on a crew overboard situation when the location of the crew has not been determined on the first pass;
26. Describe methods of steering a vessel without the use of the rudder;
27. Describe the various methods of stopping and controlling serious leaks;
28. Describe how to organize the crew in establishing a fire drill routine;
29. In the event of dismasting describe possible methods of jury rigging your vessel and what course you would then assume;
30. Describe what action you would take after your vessel had been struck by lightning;
31. List the items to be kept in a standby kit most essential for your survival.

Section V: Rules of the Road

The candidate must be able to:

32. Operate a vessel in a safe and responsible manner, applying rules 1-37, 40 and 45 of the *Collision Regulations* competently and correctly in order to maintain safe, responsible navigation in any waters by day and night;
33. Describe the shapes and characteristics of the Canadian Buoyage System.

Section VI: Weather

The candidate must be able to:

34. Describe the major cloud types, the weather and future weather associated with each;
35. State the sources of offshore weather information in one region;
36. Interpret the weather forecast and make up a rough synoptic chart for the area to be sailed;

37. Describe the formation, features, and accompanying weather of a depression in both the northern and southern hemisphere;
38. Describe the major wind belts of the world;
39. Discuss the warning signs, features, localities and seasons of the various tropical storms;
40. Describe the best course of action if a vessel is unavoidably in the path of a tropical storm.

Afloat Skills

The candidate must be able to:

1. Act as skipper and responsible crew on a passage of no less than 5 days, covering at least 500 nautical miles and venturing at least 100 nautical miles from the nearest land;
2. Obtain, reduce and plot a celestial fix using a sun-run-sun method;
3. Obtain, reduce and plot a noon sun sight;
4. Make a celestial compass deviation check using the bearing of the sun, the moon, or a star;
5. Obtain the available weather information by radio while underway and interpret the forecast;
6. Coordinate the recovery of a simulated crew overboard, sailing a minimum of 5 minutes on a steady course after falling overboard;
7. Demonstrate the various possible techniques to be used in heavy weather situations;
8. Maintain a proper and legal ship's log;
9. Demonstrate ability to sail at the advanced level of skill;
10. Demonstrate ability to assume total competent command of all operations of the vessel and its crew in an offshore environment.

Outcomes and Evaluation

Candidates command capability and vessel handling, maintenance and planning skills will be coached and evaluated throughout the training session. In addition to successful completion of the practical course candidates will be required to complete a closed book written exam that covers theoretical knowledge relevant to this standard as well as a take home passage planning assignment. In order to complete certification a mark of 70% is required on the examination and assignment.

Additional Notes

This standard offers candidates the opportunity to develop day and night offshore sailing skills in partnership with an instructor competent in those skills. The course helps sailors develop an understanding of the components of risk that sailors continue to face in their on water activities. Participants in this course will be experience actions and procedures that mitigate risk while underway.

Physical Requirements for Candidates

These are offered as live aboard courses and include 5 or more days of continuous passage. Participants will have the opportunity to experience sun, wind, spray, rain, and temperatures consistent with the time of year they take part in this activity. When underway the vessel may exhibit irregular motion due to wind and waves. Participants will be expected to learn and demonstrate skills and to perform tasks while the vessel is at the dock, at anchor, and when the vessel is underway. Participants will work in teams and will be challenged to take responsibility for planning and operation the vessel both day and night in any weather. Candidates need to be able to function for five or more days with limited or irregular periods of rest. These training sessions will require periods of moderate upper body exertion and a moderate level of arm strength handling lines for operating the vessel. In challenging weather good stamina and physical conditioning will make full participation in the session rewarding.