

Downtown Sailing Center

Part Two: Intermediate Sailing

Student Curriculum

Course Objective: Part Two of the DSC series of courses is designed to prepare the experienced crew member to be a competent DSC skipper on non-powered keelboats up to 23 feet. The curriculum includes the following topics: leaving the dock, boat control, returning to the dock and overboard recovery, as well as basic sailing theories, such as boat dynamics, wind and advanced sail trim. The course will also cover “rules of the road”, DSC sailing policies and some useful knots. Students are encouraged to take advantage of the DSC open sails and other opportunities to practice the techniques learned in this course in order to pass the DSC skipper test.

Prerequisite: Knowledge and skills covered in Part One: Introduction to Sailing.

SESSION 1

Classroom

INTRODUCTION TO THE DOWNTOWN SAILING CENTER

PART 2 CURRICULUM OUTLINE

The course will be taught in four sessions, each session consisting of a classroom part, a dockside part and an on-the-water part. Usually the classroom part will be taught in a large group setting with all students present. For the dockside and on-the-water parts, the class will be divided into smaller groups (approximately 3 students), each with their own instructor.

Session 1

Boat Control

Session 2

Rules of the Road

Docking

Session 3

Overboard Recovery

Heaving-To

Session 4

Hypothermia, Heat Exhaustion and Heat Stroke

Knots

BOAT CONTROL

True vs. Apparent Wind

Sail Trim

Sail trim is the process of optimizing the power of the sails by adjusting the sail angle in reference to the apparent wind direction and also adjusting the shape of the sail (flat or curved).

The mainsail can be trimmed with the outhaul, Cunningham, boom vang, backstay and traveler.

The jib can be trimmed with the jib sheets and fairleads.

Sail Trim Tips

In general, sails should be rather full in very light winds, a little less full in light to moderate winds, and flat in heavy winds.

Getting Out of Irons

You are in irons when the following happens: The boat is pointed directly into the wind, both sails are flapping, the boat has come to a dead stop, and the rudder and tiller have no effect on steering. The following methods are used to get out of irons:

Backing the jib

Backing the main

Accidental Jibing

Accidental jibing is a sudden swing of the mainsail across the wind. The excessive wind force attacking on the backside of the mainsail can push the boat over.

To avoid an accidental jibe, avoid sailing directly downwind on a run and never sail “by the lee” (i.e., the wind coming over the aft quarter of the boat on the same side as the boom). When jibing, always sheet in the mainsail before the stern crosses the wind.

Excessive Heeling

Sailboat heeling is the tilt of the sailboat.

Excessive heeling slows the boat and creates the possibility of water entering the boat.

Heeling can be reduced by easing out the mainsail, moving the traveler to leeward, or heading the boat into the wind.

On the Water

REVIEW

Wind awareness - direction and strength; puffs and lulls; true vs. apparent wind.

Sail parts - head, tack, clew, luff, leech and foot.

Standing rigging – forestay, backstay, shrouds and spreaders.

Running rigging – sheets, halyards, outhaul, backstay, Cunningham, boom vang and winches.

Points of sail - run, broad reach, beam reach, close reach, close-hauled and no-go zone.

PRACTICE

Tacking

Jibing

Stopping beside a floating object

Safety position

Getting out of irons

SCULLING

Moving the tiller back and forth rapidly so that the rudder acts as a fin to propel the boat through the water. Frequently used to go short distances (e.g., to reach a dock in a dead calm).

NAVIGATION

Lay a course (rhumb line)

Homework

On-the-water practice for *at least* three hours by next class.

SESSION 2

Classroom

RULES OF THE ROAD

When two boats come in close proximity to each other, there are well-defined rules for how they react to one another. One boat becomes the stand-on vessel and the other becomes the give-way vessel.

Stand-on vessel must maintain course and speed.

Give-way vessel must yield to stand-on vessel, preferably astern of the stand-on vessel.

Coast Guard regulations define many rules that determine which vessel becomes the stand-on and which becomes the give-way vessel. However, this course will cover only those rules that pertain to most situations that the DSC daysailing boats will encounter.

DOCKING

Docking Strategies

Wind forward of slip – Use the wind as a brake, drop the main as you turn toward the slip. This requires precise judging of boat momentum.

Wind aft of slip – Turn into the wind to drop the main, turn 180 degrees and drift into the slip.

Crosswind – Sail on a beam reach until slightly upwind of the slip, turn into the wind to drop mainsail, turn 90 degrees and drift into the slip.

On the Water

PRACTICE

Rules of the road

Docking

Homework

Practice docking during open sails.

SESSION 3

Classroom

OVERBOARD RECOVERY

Quick-Turn (Figure-8) Recovery

1. Shout “MAN OVERBOARD!” as soon as a crew member falls overboard.
2. Throw anything floatable to the victim.
3. Steer the boat on a beam reach.
4. Assign a pointer and keep the victim in sight.
5. Sail about four boat lengths.
6. Tack into the wind, fall off onto a deep broad reach, cross the boat’s original course. (Immediately after tacking, the jib sheets should be released.)
7. When the victim is abeam of the boat, head up onto a close reach.
8. Ease sheets to slow the boat.
9. The standard preference is to stop the boat so that the victim is on the leeward side.
10. Bring the boat to a stop alongside the victim.
11. Attach the victim to the boat and recover on board.

HEAVING-TO

On the Dock

OVERBOARD RECOVERY PRACTICE

Attachment – Tie a bowline around the dummy victim.

Retrieval – Drag the victim aboard. If unable to retrieve the victim, secure the victim to the boat, call for help (e.g., MAYDAY on VHF radio).

Aftercare – The victim may be suffering from hypothermia. Get the victim back to shore as soon as possible.

On the Water

OVERBOARD DRILL

Quick-Turn (Figure-8)

Homework

Practice overboard recovery drills during open sails. Read page 70 in *Basic Keelboat* and be familiar with the signals and treatment of hypothermia, heat exhaustion and heat stroke.

SESSION 4

Classroom

Review the signals and treatment of hypothermia, heat exhaustion and heat stroke.

Complete written test.

On the Dock

KNOTS

Bowline - Commonly used to attach the jib sheets to the clew of the jib.

Figure-8 - Commonly used as a stopper on the ends of the jib sheets in the cockpit.

Square knot - Used for sail lashings.

Sheet bend - Used to tie two different sized lines together.

Clove hitch - Used to tie a line to an object (e.g., dockline to piling).

Round turn and two half-hitches - Used to secure a line to an object (e.g., dockline to a piling).

Line handling

Coiling a line

Heaving a line

On the Water

REVIEW AND PRACTICE

Overboard Recovery

Docking

Classroom

The test will be graded and the instructor will discuss results with each student one-on-one. They will also discuss the next step in sailing education. Unless you have had significant prior sailing experience, it is recommended that you practice at the helm for *at least 20 hours* before taking the skipper checkout. Are you interested in obtaining US SAILING Basic Keelboat Certification? This is the time for you to discuss with the instructor your sailing goals and how best to achieve them.