

Coastal Skipper Advanced Course Outline

Shore-Based Course

Requirements at start date: International Certificate of Competency, Competent Crew, Day skipper, and Coastal Navigation.

Shore-Based Course: ISPA Coastal Skipper Workbook completed by classroom, correspondence, or home study.

Course Content:

Module 1 Seamanship Sail 3 and Cruising Spinnaker

OR

Module 1 Seamanship Power 3

In addition:

Module 2 General Seamanship 3

Module 3 Coastal Weather 2

Module 4 Boat Systems

Module 5 Health and Safety

Module 6 Auxiliary Engines

Minimum Duration: 20 hours.

Coastal Skipper Practical Course

Requirements at start date: International Certificate of Competency, Competent Crew, Day Skipper. Coastal Navigation and Coastal Skipper Shore-Based Course. Plus First Aid, CPR. VHF or GMDSS Radio.

Course Content:

Seamanship Sail 3 and Cruising Spinnaker Practical

OR

Seamanship Power 3 Practical

In addition:

General Seamanship 3 Practical

Coastal Weather 2 Practical

Boat Systems Practical

Health and Safety Practical

Auxiliary Engines *One of Group A, B, or C* Practical

Coastal Passage Practical

On the water course duration: Must be a live aboard course in tidal waters, 5 days, including 4 night hours, 125 miles. Stand a rotational navigational watch for the duration of the course.

Seamanship Sail 3 Practical	
Instructor's Name: _____ # _____	
Signature: _____ Date: _____	

To complete the Seamanship Sail 3 Practical, the candidate is required:

1. Demonstrate how to handle different sail materials to minimize damage
2. Explain:
 - Center of Lateral Resistance
 - Center of Effort
 - Combined Center of Effort

While acting as the Skipper of a vessel:

Upwind

1. Demonstrate the ability to power up and de-power the mainsail with correct use of a cunningham, downhaul, outhaul, main halyard, baby stay, backstay, mainsheet, traveler
2. Demonstrate the ability to power up and de-power the foresail with correct use of forestay tension, the jib halyard, jib sheet and fairlead car
3. Demonstrate fine trim, using telltales on both foresail and mainsail
4. Demonstrate the ability to trim the foresail and mainsail together to maximize lift
5. Demonstrate the ability to balance the boat, with no more than 2-3 degrees of weather helm
6. Retrieve a MOB using the "ISPA upwind procedure"

Downwind

1. Using a mainsail and foresail, demonstrate correct sail trim for broad reaching and sailing wing on wing (with no rolling)
2. Retrieve a MOB using the "ISPA downwind procedure"

Cruising Spinnaker (asymmetrical/gennaker)

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- Acting consecutively as helm, trimmer and crew
1. Set, fly, gybe, douse and pack a cruising spinnaker
 2. While flying a cruising spinnaker, gybe safely from broad reach to broad reach
 3. Demonstrate fine sail trim when:
 - Sailing a beam reach
 - Sailing a broad reach
 - Sailing downwind, wing on wing

Reefing

Single-handed:

1. Reef the main and shake a reef in the main, when hove to, or the vessel is under sail
2. Reef a roller furling foresail
3. Change to a smaller foresail

When at the wheel and with crew manning the sails, demonstrate:

1. The ability to maintain the correct trim and amount of sail required for changing wind conditions
2. Sailing onto and off a mooring buoy

Seamanship Power 3 Practical
Instructor's Name: _____ # _____ Signature: _____ Date: _____

To complete the Seamanship Power 3 Practical, the candidate is required to:

While acting as the Skipper of a vessel, demonstrate the following:

1. A high speed run, 'S' and 'U' turn and a crash stop
2. Pick up, and cast off a mooring buoy
3. Retrieve a Man Overboard buoy using the Anderson turn procedure MOB
4. Retrieve a Man Overboard buoy using the Williamson turn procedure
5. A method of retrieving an unconscious person onboard
6. Form a figure of eight while going ahead and astern around two mooring buoys
7. The correct use of trim tabs, if fitted
8. The correct use of a bow thruster, if fitted
9. The correct use of a stern thruster, if fitted
10. Demonstrate correct speed and attitude in high wind and waves

General Seamanship 3 Practical

Instructor's Name: _____ # _____
Signature: _____ Date: _____

To complete the General Seamanship 3 Practical, the candidate is required to:

1. Describe where and when the national flag, courtesy flag and club burgee are flown on a vessel
2. Describe in detail the entry procedures for both Customs and Immigration for the country of operation
3. Prior to leaving the dock, compare a lead-line reading and the depth sounder reading to determine the accuracy of the depth sounder. Compare the results with the vessel's draft to establish a shallow depth safety margin

Handling Under Power

Demonstrate the following under power:

1. In marina conditions, turn the vessel through 360 degrees around its center using forward and reverse, minimum engine r.p.m. (and the effects of prop walk when applicable)
2. A tight holding pattern in a marina
3. Use of the knot meter and engine r.p.m. to determine hull speed and an economical cruising speed

Docking

1. While at the wheel and with one crew, demonstrate docking and exiting the dock using the single-line docking technique as follows:
 - Dock port side to, and starboard side to, in both forward and reverse
 - Dock with, and against the wind and current
2. While at the wheel and with one crew, demonstrate docking and exiting the dock using the center vessel tie method for wind and current pushing the vessel off the dock
3. Demonstrate tying to a fixed dock allowing for a tidal range of 0-8 feet
4. Demonstrate a stern too tie, either alongside another vessel or with an anchor off the bow
5. Demonstrate a stern tie to the dock, with the bow tied between two pylons
6. Demonstrate rafting to a sailboat at either a dock, or at anchor and describe the problems that can be encountered

Anchoring

Demonstrate the following:

1. Use of the depth sounder and lead-line to determine actual depth, compared with the chart datum and tide and current tables
2. Anchor with two anchors off the bow to minimize swing
3. Anchor with two anchors off the bow to add holding power against strong wind, high seas, or current
4. Anchor where there is no room to swing in a small anchorage, with two anchors, one off the bow and one off the stern, OR with the stern secured to the shore
5. Anchor with two anchors, one off the bow and one off the stern to keep the vessel's bow up into the waves
6. The use of a breast anchor to hold the vessel off an obstruction
7. Demonstrate two methods of freeing a buried anchor
8. Demonstrate the use of a trip line and anchor buoy
9. Demonstrate the proper care of a dinghy including stowing, towing, carrying on deck
10. Demonstrate securing the dinghy at the dock and at anchor ensuring it is not a hazard to other vessels

Stability

1. Demonstrate the knowledge and skills to maintain stability by:
 - Loading and securing loads correctly, keeping the center of gravity low
 - Maintaining buoyancy by not overloading
 - Maintaining freeboard (reserve buoyancy)
 - Maintaining good trim
2. Describe the risks, in heavy seas, when:
 - Beam onto the sea
 - In a following sea
 - In a quartering sea
3. Describe how the center of gravity changes with
 - Deck loads
 - Icing
 - The consumption of fuel and potable water "Free surface effect"

Coastal Weather Practical

Instructor's Name: _____ # _____
Signature: _____ Date: _____

To complete the Coastal Weather Practical, the candidate is required to:

1. Demonstrate the use of VHF radio and accurately describe the weather forecast for the area to be navigated
2. Using the *Marine Weather Hazards* or similar Weather Hazards publications for the region, identify local weather hazards including inflow/outflow winds, high/rough seas
3. Describe what fair weather factors provide onshore and offshore breezes
4. Predict what weather patterns can be expected from cold and warm fronts
5. Identify, basic clouds and squall lines, and what adverse weather can be expected from their approach
6. Predict what wind direction and velocity changes will occur when going through a coastal convergence, or narrow channel with the wind on the stern:
 - On the right hand side of the channel
 - On the left hand side of the channel
7. Predict the wind conditions "Lee effect" to be expected immediately off the coastline
8. Predict the direction of wind change as the vessel approaches the coastline
9. Identify the direction of the Low and High from the physical direction of the wind
10. Describe when to expect:
 - Advection fog
 - Radiation fog
11. Using the weather forecast, Tide and Current Tables/Tidal Stream Atlas indicate on a chart, where the following will occur:
 - Wind over tide
 - Tidal rips/races
 - The direction of acceleration around headlands
 - Underwater obstructions that will cause rough water
 - The direction of back eddies
 - Areas of smooth water

Boat Systems Practical

Instructor's Name: _____ # _____
Signature: _____ Date: _____

To complete the Boat Systems Practical, the candidate is required to:

Power Supply

1. Demonstrate prudent use of the vessel's electrical power Supply
2. Demonstrate the proper procedures for connecting, disconnecting and the safe use of shore power
3. Demonstrate safe procedures when charging batteries

Potable Water

4. Demonstrate prudent management and use of the potable water system, how to fill, location of tanks and valves, including the principles of onboard water consumption and conservation
5. Demonstrate the ability to trace the potable water system from the tanks, through the switching valves, pump, filter to each faucet
6. Demonstrate the ability to switch from one tank to another
7. Demonstrate the ability to trace the potable hot water system from the tanks through the heating source to each faucet

Stove and Fuel

8. Demonstrate the operation, safe handling and safety practices related to the type of cooking stove and stove fuel used onboard
9. Demonstrate safe procedures when using the stove when cooking underway
10. Describe how to handle any stove fuel leak, or fire emergencies

Cabin Heaters

11. Demonstrate the ability to identify the cabin heating system, keep it clear of; obstructions preventing it from overheating, and any gear, or equipment that could cause ignition
12. Demonstrate the ability operate the heating system safely

Marine Head

13. Demonstrate the correct operation of the marine head and holding tank and state where and when the tank can be emptied within the local jurisdiction
14. Describe basic trouble shooting, and describe the dangers associated with holding tanks

Steering System

15. Identify the steering system onboard and demonstrate the ability to trace its path from steering wheel to rudder

Health and Safety Practical

Instructor's Name: _____ # _____
Signature: _____ Date: _____

To complete the Health and Safety Practical, the candidate is required to:

1. Rig jack lines that will prevent the crew from falling overboard
2. Draft a personal provision list and menu with at least one cooked evening meal a day for a crew of four, for a six day coastal cruise, in summer weather
3. Demonstrate how and where to stow food to minimize damage
4. Store food, to preserve and maintain the expected shelf life
5. Demonstrate the most effective use of an icebox or fridge
6. Organize and cook a meal for four
7. State the fundamental causes of seasickness, describe the early signs and the progressive steps to take to make the patient as comfortable as possible
8. Produce a personal First Aid Kit or list of the requirements for such a kit similar to that as recommended by either Red Cross or St. John's Ambulance for a cruising holiday
9. Describe the conditions likely to cause hypothermia, recognition of symptoms, the stages of hypothermia, and treatment
10. Describe the dangers of diving and swimming from a vessel and how to board without the availability of a swim ladder
11. Describe how to avoid heatstroke, dehydration and sunburn

Auxiliary Engines Practical

To complete the Auxiliary Engines Practical the candidate is required to complete one of the following groups, depending on the training vessel.

Auxiliary Engines Practical	
Instructor's Name: _____	# _____
Group A: Outboard Engines	
Signature: _____	Date: _____
Group B: Gas Inboard or Inboard/Outboard Engines	
Signature: _____	Date: _____
Group C: Diesel Inboard or Inboard/Outboard Engines	
Signature: _____	Date: _____

Group A: Outboard Engines

Note: Basic starting and stopping procedures are covered in Competent Crew.

To complete the practical, the candidate is required to:

1. State the capacity of the fuel tank on the vessel
2. Check the accuracy of the fuel gauge
3. Maintain an engine "running time log" to minimize the risk of running out of fuel
4. Demonstrate how to safely fit and remove an outboard motor to a vessel, including fuel tank and system, battery (where applicable) and a safety chain or line
5. Identify the following outboard motor parts: tilt mechanism, propeller, shear pin, exhaust and water exit port, anti cavitation plate, mounting brackets and screw clamps, engine cover, gear shift lever, spark plugs, spark-plug leads, choke, throttle, start cord, kill switch, kill switch safety cord
6. Carry out the routine pre-start checks required on this type of engine
7. Demonstrate the ability to trace the basic ignition system and state possible reasons for failure
8. Demonstrate the ability to trace the fuel lines from the tank through the system to the carburetor and describe where to expect and remedy problems
9. Demonstrate the ability to start and stop an outboard engine using correct procedures and checks
10. Demonstrate the use of the kill switch cord
11. Demonstrate the ability to trace the flow of water through the cooling system and show where the flow could be interrupted
12. Describe the action required when the engine:
 - Will not start
 - Runs well then stalls
 - Overheats
 - Has excessive blue smoke emissions
 - Vibrates excessively
13. Prepare a personal list of tools and spare parts to enable the skipper to troubleshoot effectively, on this type of engine, while coastal cruising

Group B: Gas Inboard or Inboard/Outboard Engines

Note: Basic starting and stopping procedures are covered in Competent Crew.

To complete the practical, the candidate is required to:

1. State the capacity of the fuel tank on the vessel
2. Check the accuracy of the fuel gauge
3. Maintain an engine "running time log" to minimize the risk of running out of fuel
4. Identify all of the following parts: ignition switch, starting solenoid, starter motor, choke, intake manifold, carburetor, flame arrestor, exhaust manifold, exhaust and raw water exit port, mountings, lever, spark plugs, spark-plug leads, coil, distributor, throttle, kill switch water pump, alternator, drive belts, coolant reservoir, heat exchanger, drip pans

5. State:
 - Why a contained gas engine can be dangerous
 - The safety requirements for ventilation, flame arrestor and drip pans
6. Demonstrate the ability to trace the basic ignition system and state the possible reasons for failure
7. Demonstrate the ability to trace the flow of water through the internal cooling system and show where the flow could be interrupted
8. Describe the transfer of heat from the engine internal cooling system to the raw water system through the heat exchanger
9. Demonstrate the ability to fault find throughout the raw water cooling system, by tracing the flow of water from the intake seacock through to the exhaust and describing the remedial action for blockages at each point
10. Describe the procedure to change a raw water pump impeller
11. Carry out the routine checks required on this type of engine
12. Check the alternator and pump belts and describe how to adjust and change them
13. Describe the action required when the engine:
 - Will not start
 - Runs well then stalls
 - Overheats
 - Has excessive blue smoke emissions
 - Has excessive black smoke emissions
 - Vibrates excessively
14. Prepare a personal list of tools and spare parts to enable the skipper to troubleshoot effectively, on this type of engine, while coastal cruising

Group C: Diesel Inboard Engines or Inboard/Outboard Engines

Note: Basic starting and stopping procedures are covered in Competent Crew.

To complete the practical, the candidate is required to:

1. State the capacity of the fuel tank on the vessel
2. Check the accuracy of the fuel gauge
3. Maintain an engine "running time log" to minimize the risk of running out of fuel
4. Identify the following: starting switch, plug pre heat switch, starting solenoid, starter motor air intake manifold, injectors, injector pump, low fuel supply lines and low-pressure pump exhaust manifold, exhaust and raw water exit port, mountings, kill switch solenoid and kill switch, drive belts, water pump, alternator, coolant reservoir, heat exchanger, drip pans
5. Complete the daily engine checks
6. Check the alternator and pump belts and describe how to adjust and change them
7. Demonstrate the ability to trace the flow of water through the internal cooling system and show where the flow could be interrupted
8. Describe the transfer of heat from the engine internal cooling system to the raw water system through the heat exchanger
9. Demonstrate the ability to fault find throughout the whole raw water cooling system, by tracing the flow of water from the intake seacock through to the exhaust and describing the remedial action at each point
10. Describe the procedure to change a raw water pump impeller
11. Identify the following: cutlass bearing, transmission, gearshift located on the transmission, stuffing box, stern gland, engine/propeller flange coupling
12. Explain the transfer of heat from the engine internal cooling system to the raw water system
13. Demonstrate the ability to prime a diesel fuel system, by tracing the system from the tank to the injectors indicating what steps are to be taken at each stage
14. Prepare a personal list of tools and spare parts to enable the skipper to troubleshoot effectively, on this type of engine, while coastal cruising

Coastal Passage Practical

Instructor's Name: _____ # _____
Signature: _____ Date: _____

To complete the Coastal Passage Practical, the candidate is required to:

1. Demonstrate the practical requirements of the Coastal Navigation Certificate
2. Demonstrate a thorough understanding of the International Regulations for Preventing Collisions at Sea by day and at night
3. Demonstrate a thorough understanding of the International Buoyage system by day and at night
4. Taking into account weather and tidal current, plan a 24 hour non-stop passage demonstrating the following:
 - The selection of appropriate charts
 - The correct use of different scale charts
 - Laying a course allowing for set and drift
 - The calculation of set and drift between two points
 - Correct timing for entry and exit of at least one pass
 - Predetermine clearing and safety bearings
 - The use of transits, stern and lead marks
5. Follow a pre-prepared passage plan by standing a rotational navigation watch for the duration of the course by day and night