

ASA106 Advanced Coastal Cruising Standard

Delmarva Sailing School

Seven day class:

See dates for classes on Schedule page

A ASA106 Certified Sailor has successfully demonstrated his or her ability to:

1. Describe the theory of true and apparent wind.
2. Describe the theory of sailing using force diagrams. Graphically find the center of effort and center of resistance of sails and keel, respectively.
3. Describe with the aid of diagrams the causes of lee and weather helm and methods of correcting them. Include the reasons for preference of slight weather helm, sail selection (including full sails or reefed sails), mast position and mast rake.
4. Describe sail shapes and sail interactions as needed for different wind strengths and points of sail. Describe the effects on sail shape and sail interactions when adjusting the following:

Luff Tension

Leech line

Back Stay Tension

Main Sheet

Outhaul

Boom Vang

Jib Fairleads

Traveler

Downhaul

Cunningham

Jib Sheet Tension

Weather

5. Identify how to use a barometer and a thermometer either singly or together to assist in predicting weather.
6. Describe cirrus, cirrostratus, altocumulus, stratocumulus, cumulonimbus and cumulus clouds and the weather expected to be associated with each.

Students who complete ASA106 Advanced Coastal Cruising should be able to safely act as skipper of a sailing vessel about 30-50 feet in length. This is a day and night time standard in coastal and inland waters, in any weather.

Prerequisites: ASA101 Basic Keelboat , ASA103 Basic Coastal Cruising, ASA104 Bareboat Charter, and ASA105 Coastal Navigation certifications.

The ASA106 Advanced Coastal Cruising class occurs while students complete a week long circumnavigation of the entire Delmarva Peninsula. This includes traversing the entire Chesapeake Bay, C & D Canal, Delaware River, Delaware Bay, and Atlantic Ocean. Students sail the ocean leg in watches sailing around the clock on our Pearson 39' sloop, named 'Gallivant'. \$1,099. Seven day class includes text, ASA test, ASA certification, food and drinks. Students usually eat out some evenings at own expense. Includes all slip and other mooring fees, fuel, pump out, and all other expenses.



Gallivant under sail

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Discover the Captain in You

7. Describe local weather in relation to thermal winds and prevailing winds.
8. Describe three sources of weather information available to yachtsmen in the United States.

Seamanship

9. Describe the proper selection of sails on a given boat for all weather conditions and give reasons for the selection made.
10. Describe the appropriate heavy weather precautions for the boat selected and describe how they are carried out. Include sail changes, use of special equipment (safety harness, sea anchor), doubling up of gear, special checks in areas liable to chafe, stowage of equipment (above and below decks), additional checks on condition of bilge, special arrangements for towing dinghy/tender (if used), problems of fatigue, selection of clothing, and the need of at least two on deck at all times.
11. Describe all the steps to be taken by skipper and crew for "heaving to" and "lying ahull."
12. Describe the methods of rafting at anchor and the possible problems with day and night rafting.
13. Describe how to prevent the tender/dinghy from riding up and bumping the vessel's hull while anchored at night.
14. Describe step by step how to secure a boat overnight with one anchor and stem made fast to the shore or dock.
15. Describe two methods of using a second anchor to reduce swinging.
16. Describe four different methods of recovering an anchor which is fouled on the bottom.
17. Describe when and how to use a trip line and an anchor buoy.
18. Describe when and how to set an anchor watch and the responsibilities of such a watch.
19. Describe how to:
 - Prepare a towing bridle.
 - Pass a tow line to another boat.
 - Get underway with a tow and which speeds to use.
 - Avoid fouling the propeller.
 - Avoid danger of towline parting under stress.
 - Make proper lookout arrangements.
20. List from memory the visual distress signals listed in the applicable U. S. Coast Guard publications.
21. Describe how the boat should be handled and what actions should be taken when the following emergencies occur while under sail:
 - The boat is dismasted.
 - The boat runs aground on a lee shore.

Gallivant has a private double berth fore and aft. The starboard settee opens into a double and the port settee opens into a single. All ASA106 classes are limited to 3-4 students assuring comfort and privacy. Students sleep on board all nights.



Learning to provision boat is part of course. On first day will go to grocery store and buy food and drinks (Included in base price). Students usually eat out one or more nights at own expense.

Gallivant is a cruiser/racer and is quipped with Air Conditioning, refrigeration, depth gauge, knot log, wind speed, windlass, self tailing winches, traveler, outhaul, main and genoa sheets, navigation station, 130 Genoa, Dutchman mainsail, VHF, GPS, Chart plotter, Radar, and all required USCG safety equip-



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22. Describe how the boat should be handled and what remedial action should be taken when the following emergencies occur while under power:

- The engine cooling water fails to flow.
- The engine fails in a crowded anchorage.
- The engine fails in a busy channel.

23. State the fuel tank capacity and range of the selected boat and the factors that could affect its range.

24. State the water tank capacity on your boat and the minimum water requirement per person

25. Describe the skipper's responsibilities and action for the following common courtesies and customs of yachtsmen:

- Permission to board.
- Permission and entitlement to come alongside.
- Permission and entitlement to cross adjacent boats when rafted.
- Rights of first boat at an anchorage.
- Keep clear of boats racing (even though cruising boats may be the "stand on boats").
- Offering assistance to yachtsmen in trouble.
- Flag etiquette: National flag, Courtesy flag, Burgee/house flag, Dipping flag.
- Lines dangling over side.
- Fenders over side when underway.
- Checking of boat's appearance (shipshape & Bristol).

26. List the documents required and the procedures followed when leaving and entering U.S. territorial waters.

ASA106 is an advanced sailing class that requires advanced navigation skills and sailing at night.



Gallivant underway through C & D Canal

Gallivant is a 39'3" sloop rigged sailboat. Beam is 11'8", displacement is 17000 lbs. She has an inboard Yanmar diesel and a 14 HP outboard for the dinghy that hangs from the davits at the stern.

Engineering

27. Describe and demonstrate the appropriate collective measures for the following common engine problems as applicable to the boat selected:

- Stoppage in fuel line.
- Burned and defective points.
- Fouled spark plug/injector problems.
- Carburetor icing (spring and fall sailing).
- Unserviceable starter.
- Electrolysis.

28. Describe when and how to carry out an oil change in the engine selected.

29. Describe the minimum preseason maintenance and checks given to the following:

- Hull (including underwater fittings, electrical systems, painting, antifouling).
- Spars and rigging (including electrolysis).
- Sails.

Safety

30. Describe recommended permanent and temporary installation methods of grounding for lightning.

31. State the factors you would consider before allowing anyone to go swimming while the boat is at anchor.

32. State the danger of overhead power lines.

33. Describe the uses, capabilities and limitations of a portable radar reflector.

Sailing Skills

Boat Handling Under Sail (by Day and Night, 30 hours minimum ASA instructional program)

A Certified Sailor has successfully demonstrated his or her ability to:

34. Act as helmsman and demonstrate the proper techniques of beating, reaching, running, tacking, jibing, heading up, heading down (bearing away) and luffing in approximately 20 knots of wind.

35. Work to weather to best advantage using wind shifts, tides and local geography.

36. Sail a compass course (within 10 degrees) with sails trimmed.

37. Demonstrate correct methods of towing a dinghy.

38. Properly carry out nighttime man overboard procedures.

39. Anchor, weigh anchor, pick up and cast off moorings while acting as helmsman and/or crew.

40. Demonstrate how to take a sounding using two different methods.

41. Stand a navigation watch during a passage of about 20 miles by night and 20 miles by day and demonstrate all of the skills required for the ASA Coastal Navigation Standard.



Students at the helm of Gallivant during October 2011 ASA106 class



Student correcting a rigging problem under sail

Students typically arrive the evening before the seven day class begins. The ASA106 Advanced Coastal Cruising class takes place while students circumnavigate the Delmarva Peninsula. Typically a clockwise approach is taken. A typical itinerary is for students to sail on day one to the entrance of the C & D Canal and stay in the Bohemia River under anchor. Day two takes them through the C & D canal, down the Delaware River, and into the Delaware Bay. Once students leave the C & D canal, there are no planned stops until Gallivant rounds Cape Charles, approximately 200 miles away. Students keep a watch schedule and sail 24 hours a day. Sometime during the third or fourth day the vessel typically would round Cape Charles. The remaining 3-4 days would be spent sailing north on the Chesapeake Bay. During the journey north the boat is either moored in a slip or anchored at night. Destinations depend on wind and schedule.

The captain's log from the ASA106 class from October, 2011 is shown below:

Captain's log for Delmarva Circumnavigation Oct 8 – Oct 14, 2011

10-8-11: Departed Rock Hall, MD 10:27 under motor. Very light wind. Headed Northnortheast to Bohemia River. Arrived Bohemia River and under anchor 18:19. Dropped hook at Veazey Cove on East side of cove. 7 feet of water. Motored 7:40 at 2400 RPM entire day. Very quiet anchorage.

10-9-11: Raised anchor 07:25 under motor. Still very light wind. Entered C & D Canal around 08:30 at slack water. Stopped for fuel at Summit Marina, just past the Summit Bridge. Good place to stop but had to wait in line for two power boats to clear dock. Departed Summit 11:00. Left C & D canal 12:30. Made average speed of 5 knots with following current most of the way. Entered Delaware River at slack water and then had following current.

Maintained 5-6 knots until around 17:00 when current changed direction. SOG then slowed to 3-4 knots. Motored all night with little or no wind. Maintained 4 hour watch schedule with three on and two off most of the time. Crew quickly became very capable of following marks at night and tracking of vessels at night using radar and bearing compass to spot ships. Soon everyone seemed comfortable with nighttime sailing and some said it was much easier than they had anticipated.

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10-10-11: 14:30 refueled at Cincoteague Island, Curtis Merritt Harbor of Refuge after already passing Cape May, Rehoboth Beach, Ocean City, and Assateague Island. Stayed just outside of channel approximately 3-5 miles from shore entire way. Saw lots of sea traffic including tugs with barges in tow, container ships, tankers, sport fishermen, and other vessels. When heading into refuel at Cincoteague Island encountered hundreds of dolphins. Many came along side of boat to greet us. Some surfaced within couple feet of boat. Still no wind and continued motoring. Slow progress. Maintained 3-4 knots on average.

10-11-11: Approached Cape Charles around 04:00. Suspended watch schedule and called for all hands on deck as we rounded the cape. Took course below main channel to miss expected traffic. Traffic surprisingly light. Passed over bridge tunnel 0500. Motored to Cape Charles with tired crew. Still no wind. Arrived Cape Charles 11:00 and spent night at Cape Charles Town Harbor. Had lunch at Kelly's Gingernut Pub and then everyone slept until dinner and then went back to Gingernut for dinner.

10-12-11: Departed Cape Charles. Finally had wind. 10-12 knots. Sailed to Smith Point, located just on south side of entrance to Potomac River on Little Wicomico River (not Great Wicomico River, which is just south of Smith Point and much larger, and got slip at Smith Point. Entry very difficult. Called marina and told that locals enter from South. One of our charts showed only 4 feet of water on approach but local advise said it was OK. Took very careful approach zigzagging through shoals using electronic fixes updated every minute until we approached FI R 2.5 s 15 foot 4M "2LW". After that marks easy to follow but some get very close to shore and zig zag into marina. Finally reached mooring along side of Smith's Marina. Only two restaurants 4 miles away and both closed. Had dinner on board Gallivant. Fuel available but did not need to refuel. County atmosphere.

10-13-11: Nice wind 10-15 Knot. Sailed to Soloman's Island, located just inside of the entrance to the Patuxent River. Stayed at Soloman's Yacht Center. First Class Place. Nice bathrooms and showers. Took south approach as we got near Soloman's Island instead of northerly approach.

10-14-11: Woke to excellent winds of 10-15 knots. Departed around 7:30 AM. Sailed 65 nautical miles in single day to Rock Hall. Winds started out southerly but shifted to West giving us beam reach most of the day. Experienced numerous squalls with Cumulonimbus clouds, producing gusty winds with shifts in direction and winds into the mid 20s at times. Put on single and sometimes double reefs on mainsail and shook out many times throughout the day. Made excellent progress in afternoon with beam reach and 14-18 MPH winds on average with gusts to 24 mph. Had maximum speed of 8.8 knots. Gallivant's theoretical hull speed is 6.5 knots. Sailed under Bay Bridge 17:30 PM. Arrived around 3 miles southwest of Rock Hall around 18:30. Winds suddenly picked up into the mid 20s on average with gusts higher. Took down sails and motored in. Took 2.5 hours to travel 3 miles making 1.5 knots or less most of the way in extreme wind conditions and under darkness. Finally docked Gallivant stern in at 20:00. Went to Harbor Shack for celebration dinner.



Learning to handle squalls is part of ASA106.



Beautiful Sunset on Ocean leg

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