ASA 117 - BASIC CELESTIAL ENDORSEMENT

OVERVIEW:

ASA 117 Basic Celestial Endorsement introduces the core concepts of celestial navigation, using a traditional sextant and a Nautical Almanac. You'll learn how to calculate time conversions for navigation and determine sunrise, sunset, and twilight times for your vessel's position. The course covers the operation of a traditional sextant, including taking accurate measurements of the sun and Polaris to determine latitude and longitude. By applying corrections and plotting your position on a chart, you'll develop the skills to perform basic celestial navigation, ensuring you have a reliable navigation method, even when electronics aren't available.

PREREQUISITES:

- ASA 105 - Coastal Navigation

And the ability to demonstrate competencies in all knowledge and skills elements of that Standard.

STUDY MATERIALS:

- GPS Backup with a Mark 3 Sextant By David Burch

ASA 117 - BASIC CELESTIAL ENDORSEMENT STANDARDS

AMERICAN SAILING

SKILLS:

1. Describe the terms and theory of Basic Celestial Navigation.

Using a traditional sextant and Nautical Almanac and without the use of a programmed calculator or computer:

2. Convert between standard time and zone time to GMT/UT in either direction.
3. Calculate the zone time at a given longitude.
4. Determine the times of sunrise, sunset and civil twilight for a vessel's position.
5. Describe and identify the parts, principals and operation of a traditional sextant.
6. Determine altitudes of the Sun and Polaris by a traditional sextant.
7. Obtain Latitude and Longitude at noon (LAN) by applying the sextant corrections for conversions of the raw sextant altitudes (hs) of the Sun to the true celestial altitudes (HO) of the Sun.
8. Determine the vessel's latitude and Estimated Position at morning and evening twilight by means of the altitude of Polaris.
9. Plot latitudes and EPs on a chart.