

MTC609

Oceans Navigation-Celestial Navigation (HOUSTM-107)

Duration 11 days

Target group Any applicant who has successfully completed your Oceans Navigation / Celestial Navigation (500/1600 Tons) (HOUSTM-107) course will satisfy the professional examination requirements for increasing the scope of the following endorsements from near coastal to oceans: Second or Third Mate of self-propelled vessels of unlimited tonnage; AND Master or Mate of self-propelled vessels of less than 500 or 1600 ORT; AND Master or Mate of self-propelled vessels of less than 200 ORT; AND Master or Mate of Uninspected Fishing Industry Vessels; AND The Celestial Navigation training requirements of 46 CFR 11.309(a)(4)(viii) for an STCW endorsement as OICNW on vessels of 500 GT; AND The Celestial Navigation standards of competence required by 46 CFR I 1.309(a)(3); AND The Celestial Navigation standards of competence required by STCW Code Section A-II/1 and Tables A-II/1, as amended 2010, meeting the National Assessment Guidelines from NVICs 12-14(Ch-3) and 02-18 Tasks 1.1.A, 1.1.B, 1.1.C, 1.1.D, 1.1.E, and 1.1.F

Prerequisites Students must hold a mate's license or higher and be able to read and write.

Objective Any student that has successfully completed this course will be able to:

- Perform piloting techniques such as distance off and bearing problems
- Explain the principles, operation, and maintenance of magnetic and gyrocompasses
- Describe the features and use of nautical charts
- Understand the use of navigation instruments and accessories
- Describe and explain the use of aids to navigation in the IALA-A and B systems
- Describe the purpose and use of Sailing Directions and other navigation publications
- Define nautical astronomy and navigation terms and identify and select stars
- Determine compass error by amplitude, azimuth, and terrestrial observations
- List the features of ocean current systems
- Describe the characteristics of weather systems
- Explain the features of tides and tidal currents
- List the basic principles of watchkeeping
- Describe elements of the Navigation Safety Regulations (33 CFR 164)
- Find latitude by Polaris and by meridian transit
- Determine fix and running fix by celestial observation
- Determine zone of sun rise/set/twilight
- Adjust the sextant and correct for errors
- Measure the altitude of the sun and other stars
- Determine time of Meridian Transit and latitude by Meridian Transit
- Solve great circle, parallel, mid-latitude, great circle sailing problems, and Mercator sailing problems
- Calculate tide and tidal current problems

Contents This 11 day (80 hours) course covers the following contents:

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| <ul style="list-style-type: none"> - Terrestrial Foundations for Ocean Navigation - Mercator Sailing - Nautical Astronomy - The Celestial Equator Coordinate System - The Horizon Coordinate System - The Navigation Triangle - Time - Time of Meridian Transit - Calculations - Latitude at Meridian Transit - Zone of Time of Sunrise/Sunset/Twilight - Watchkeeping - Sextants and Altitude Correction - Nautical Almanac - Circles of Equal Altitude and Altitude Intercept - Solving Navigation Triangles - Problems - Fix/Running - Sun - Accessories - Fix/Running - Star - Regulations - Latitude by Polaris - Star/Planet Identification and Selection | <ul style="list-style-type: none"> - Parallel and - Mid-Latitude Sailing - Great Circle Sailing - ETA - Amplitude - Azimuth - Tide and Current - Weather - Basic Principles of - Ocean Currents - Compasses - Charts - Distance Off/Bearing - Instruments and - Navigation Safety |
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Exam

In order to successfully complete this course, each candidate must obtain a grade percentage of not less than 80% on the Navigation Problems: Oceans exam (15 questions); and 70% on the Navigation General: Oceans exam (70 questions).