**Advanced Meteorology**

Course Length: **40 hours**  
Price: **$950.00**

This course encompasses the following: the earth-atmosphere system, weather elements: atmospheric thermodynamics; wind systems; cyclones and anti-cyclones, air masses, fronts and middle-latitude cyclones; violent local storms; tropical storms; the synoptic weather map; weather service for merchant shipping; weather forecasting; ocean waves; sea ice and ice accretion; weather map construction and analysis; optimum ship routing utilizing the prevailing and projected weather conditions to advantage; weather routing to avoid adverse conditions; practice of practical shipboard reporting procedures. Forecasting and hurricane avoidance techniques. Students will be able to understand and interpret synoptic charts and forecast area weather. This syllabus covers the requirements of the 1995 STCW Convention Chapter II, Section A-11/2. This functional element provides the detailed knowledge to support the training outcomes related to the Navigation at the Management Level. Students completing this course will be knowledgeable of and have proficiency in forecasting weather and oceanographic conditions. Additionally, students will gain knowledge of:

1. Synoptic Charts  
2. Weather Forecasting  
3. Ocean Current Systems  
4. Calculation of Tidal Conditions  
5. Forecasting and Routing software systems  
6. Shipboard Damage Case Study

Any applicant who has successfully completed this 40-hour Advanced Meteorology course will satisfy the Advanced Meteorology training requirements for STCW certification as Master or chief Mate on vessels of 500 or more gross tonnage (ITC). The practical assessments in this course will be accepted as the equivalent of the following assessments from the National Assessment Guidelines for Table A-II/2 of the STCW Code: M-6-1A; M-6-2A. Applicants who have successfully completed your course need not present completed “Control Sheets” for these assessments in application for STCW certification.

**Course Tools Required**

- A **clear mind** ready to learn and retain a large volume of information.  
- Paper and pencil for note taking  
- A scientific calculator  
- Plotting tools

**Recommended Reading**