



STAR Center

Simulation, Training, Assessment & Research



ISO 9001
Certificate No. 38806

To: **Advanced Meteorology Students**

From: Deck Department

Re: **Advanced Meteorology Course Preparation**

Welcome to the Deck Upgrade-Advanced Meteorology Course

Please note that you must meet the following requirements before registering for this course:

- hold STCW-95 certification as an “Officer in Charge of a navigational Watch”
- have an unlimited Second Mate’s license
- be in good physical health
- speak and understand English
- be at least 21 years of age

This is a concentrated advanced level 5-day course in Meteorology that requires that the student already have a general basic knowledge and understanding of weather and weather systems.

Topics to be covered include:

- **basic requirements and responsibilities of forecasting weather and oceanographic conditions**
- **planetary and synoptic scale meteorology** – *planetary system of wind and pressure*
- **the weather associated with principal air mass types**
- **500 Mb upper air concepts and facsimile charts**
- **characteristics of various synoptic systems** – *the formation, structure, and weather associated with depressions and principal frontal systems – the formation structure and weather associated with non-frontal depressions and weather systems – the formation of sea waves and sea swells*
- **Application of facsimile charts** – *Evaluation of synoptic scale analyses and prognostic charts from any source - The Maritime*

Forecast Code and the range of information available through fax transmissions – voyage planning with respect to weather conditions and wave height

- **Tropical Revolving Storms (TRS)**
- **Ocean current systems** – *surface water circulation of the ocean and principle adjoining seas*
- **Types of ice, origins and movements** – *the guiding principles relating to the safety of navigation in the vicinity of ice – conditions leading to ice accretion on ship's superstructure, dangers and remedies available*
- **Meteorological tide and currents**
- **Forecasting and routing software systems**

Prior to reporting for the course it is highly recommended that any unfamiliar topics be reviewed using one or both of the following course references:

Weather for the Mariner 3rd Ed.
William J. Kotsch, Rear Admiral, U.S. Navy (retired)
1983

Mariner Weather
Nathaniel Bowditch
1977

For further information on these and all Upper Management Level assessments, may check the following USCG website:

<http://www.uscg.mil/stcw>

Look under *Merchant Marine Information Center* (green highlight)/Policy and Guidance. Select 2002 from menu. Look for Policy number 04-02. Scroll down and you will find the Upper Management Level Assessments.

Any questions regarding the Advanced Meteorology course may be directed to telephone number 1-800-942-3220 extension 7170

Sincerely,

Deck Department