



## CAPCA

Chesapeake Area Professional Captains Association  
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### Continuing Education Course Outline

**Title of Course:** CAPCA Basic Marine Weather

**Date of Course:** Saturday & Sunday, April 20 & 21, 2013 8:00am to 5:00pm

**Course Location:** Annapolis Elks Lodge #622, Edgewater, MD 21037

**Course Instructor:** Senior Meteorologist Lee S. Chesnea [www.marineweatherbylee.com](http://www.marineweatherbylee.com)

#### Day One:

**0800 – 0830: Welcome: Opening Statements & Introductions**

**0830 – 0900: Definitions of the Atmosphere, Weather, & Climate**

**0900 – 0945: Layers of the Atmosphere – Focusing on Where Most Weather Occurs**

**0945 – 1015: Role of the Sun and Radiation in Generating Land & Sea Breezes**

**1015 – 1045: Role of Moisture in the Atmosphere**

**1045 – 1200: Basic Concepts of Pressure and Wind**

**1200 – 1300: Lunch – Networking**

**1300 – 1345: Global Pressure & Wind Belts**

**1345 – 1430: Scales of Weather Systems**

(Global Scale; Jet Streams; Synoptic Scale; Lows & Highs, Meso-Scale;  
Squall lines, Micro Scale; Thunderstorms/Micro-Bursts/Waterspouts)

**1430 – 1530: Air Masses and their impact on Synoptic Scale Weather**

**1530 – 1600: Map Discussion**

(Marine Weather Analysis and Forecasts Charts. Homework: Read Storm &  
Fronts Article.)

**1600 – 1630: Review, Group Discussion & Networking**

*(Breaks will occur throughout the day per Instructor's discretion.)*

## **Day Two:**

- 0800 – 0830: Critical Discussion of the Marine Advisory and Warnings System**  
(National Weather Service-(NWS), Small Craft Advisories (SCA), Gale, Storm, and Hurricane Force Warnings)
- 0830 – 1200: Synoptic Scale Weather Systems**  
(Dominant middle latitude (30N/S-60N/S) migratory “Lows & Highs” and their associated “Synoptic Scale Features” such as Fronts (Cold, Warm, Occluded, & Stationary), and Troughs & Ridges & occasional Squall Lines)
- 1200 – 1300: Lunch – Networking**
- 1300 – 1430: How to Read Surface Weather Maps to Circumvent Heaviest Weather**
- 1430 – 1500: Scales of Weather Systems**  
(Global Scale; Jet Streams; Synoptic Scale; Lows & Highs, Meso-Scale; Squall lines, Micro Scale; Thunderstorms/Micro-Bursts/Waterspouts)
- 1430 – 1500: Understanding the Importance of Documentation & Verification of Forecasts**  
(Lee will take the class through the cultural process of comparing forecasts (48-96 hours surface pressure forecasts) to the most current surface pressure analysis charts, having the same valid date and time in order to make safety decisions and strategic planning.)
- 1500 – 1530: Live Weather Map Discussion**  
(The last part of the afternoon session will be devoted to a live weather map discussion, (focusing surface pressure analyses and forecasts), in order to consolidate the learning of the past two days and to use this discussion as a road map for the attendees to follow up on the own.)
- 1530 – 1600: Review, Group Discussion & Networking**

*(Breaks will occur throughout the day per Instructor’s discretion.)*