

MARINE GEOLOGY (MEES698G)

FALL 2008, MW 1:30-3pm at Horn Point Lab and on IVN (3 credits)

Instructor: Cindy Palinkas (cpalinkas@hpl.umces.edu), 410-221-8487

Course Description: In this graduate-level introduction to marine geology, a brief review of the formation of the ocean basins is presented, followed by a detailed study of the ocean margins. Sedimentary processes operating in the fluvial, estuarine, nearshore and continental-shelf regions will be discussed, as well as sea-level history. Biogeochemical interactions will be considered throughout the course via student-led discussions of recent publications.

Target Audience: Students with an interest in oceanography; biogeochemistry; estuarine processes; transport of particles and their associated bacteria, nutrients, and pollutants...in short, everyone!

No Prerequisites or Required Text: Necessary background materials will be provided and readings will be assigned from recent publications

Lecture Outline:

Structure of the Ocean Basins

- Geophysics and ocean morphology
- Marine stratigraphy and geochronology
- Hydrothermal vent systems

Evolution of the Ocean Basins

- Sea-level history
- Sediment erosion and transport
- Sedimentary environments:
 - Fluvial and estuarine
 - Coastal zone and nearshore
 - Continental shelf
- Evolution of the global ocean and climate change



Course Format: The course will be divided into two (unequal) parts examining ocean basin formation and evolution through sedimentary processes. There will be a midterm and final, as well as periodic homework assignments and group discussions on recent literature.

Questions? Contact Cindy Palinkas (cpalinkas@hpl.umces.edu), 410-221-8487

