

MARA A156: MARITIME ENVIRONMENT

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	095900 - Marine Technology
Units	2 Total Units
Hours	36 Total Hours (Lecture Hours 36)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)

Course Description

Students will learn about the systems that drive global weather patterns and conditions commonly found along major shipping routes as well as hubs of recreational yachting. Global and regional physical oceanography will be covered as it relates to navigational challenges to the mariner. Understanding oceanography and weather will aid the student in understanding pollution regulations and the responsibilities of the mariner to the environment in which he or she works. This is a required course of the Professional Mariner Program. A facility fee will be charged for field trips. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Locate sources for weather information and routing.
2. Create a passage plan that demonstrates an understanding of anticipated conditions.
3. Describe pollution regulations as they apply to environmental stewardship.

Course Objectives

- 1. Locate cold front position on weather map.
- 2. Explain mechanisms that drive global regional weather systems.
- 3. Identify conditions that affect rough seas.
- 4. Appraise dangerous maritime situations and describe response.
- 5. Provide for the safety of self, passengers, crew, and vessel when anticipating rough voyages.
- 6. Define how cargo stowage affects vessel stability.
- 7. Recite regulations regarding pollution.
- 8. Defend environmental cooperation.
- I Taking the course two times enhances skills by supervised repetition and practice.

work Oceans Pacific Atlantic Southern Arctic Seas Horizontal movement of water Currents Circular flows of water Ocean surface currents Deep water currents Vertical movement of water Tides Vertical mixer and circulation Vessel stability safety Waves Rain, Snow, Ice Cargo stowage Environmental Cooperation Prevention of Marine Pollution National Oceanic and Atmospheric Administration (NOAA) International Convention for the Prevention of Pollution from Ships (MARPOL) regulations Fish and Game regulations Marine Sanctuaries and Limited Access areas Marine life

Method(s) of Instruction

- Lecture (02)

Instructional Techniques

Lecture Demonstration

Reading Assignments

Writing Assignments

Book report or term paper

Out-of-class Assignments

Demonstration of Critical Thinking

Multiple choice and short answer quizzes Multiple choice, short answer and long answer tests Written paper on approved topic.

Required Writing, Problem Solving, Skills Demonstration

Book report or term paper

Textbooks Resources

1. Required Maloney, Elbert.S.. Chapman Piloting Seamanship, 65 ed. New York: Hearst Books, 2006 Rationale: -

Lecture Content

Weather: Weather for the Mariner Wind Weather Changes Fog General cause for weather Clouds Heated air and cooled air Hadley cells Global Circulation Fronts Cold Warm Occluded Weather information sources Oceanography for the Mariner Knowing the environment in which you