Course Description for **P-Marine Biology (43811/2)**

DEPARTMENT: Science

GRADE: 11 and 12

LENGTH: One year

CREDITS: 10 (Ten)

PREREQUISITE: Students must have completed one year each of Biology and Integrated Physical Science (or equivalent) prior to enrolling in this course.

COURSE DESCRIPTION: This course will examine the physical and biological components of the marine environment. The study will include evaluating the characteristics and classification of marine organisms, both plants and animals. Evidence for the evolution of life on earth will be considered. The effects of the marine environment on global life systems will be examined along with the International laws governing human use for economic purposes of the ocean habitat and its resources.

EXIT CRITERIA: **Students Will:**

1. Demonstrate an understanding of basic concepts regarding systems energy flow, characteristics of life, and the ecology of marine and continental environments.
2. Develop an understanding of the theory of Plate Tectonics and its influence on a global scale for physical and biological evolution.
3. Become aware of the geological aspects of the marine environment and its influence on the organism niches, adaptations, behavior, and uniqueness.
4. Demonstrate knowledge of the many unique physical features of the marine environment such as tides, currents, temperature, salinity, and pressure.
5. Develop an understanding of the diversity and unity of organisms in the marine environment.
6. Become skilled at utilizing up-to-date technology, particularly computers and computer networks, to collect, analyze, and evaluate marine data. Students will utilize data to suggest and evaluate theories about the marine environment and its relationship to humans and their activities.
7. Understand the adaptations, diversity, and characteristics of plants and animals in various marine system microenvironments including tidal estuaries, coral reefs, sandy beaches, rocky shores, pelagic, nektonic, and benthic regions.

8. Demonstrate an understanding human impact on the marine environment, particularly in terms of resource harvesting and use of the world's oceans as dumping grounds.
9. Develop an understanding of the importance of the oceans to the economic and social development of people throughout the world.
10. Develop ideas for programs to educate people about the importance of the oceans for the survival of humans as well as all life on the earth.

GRADING CRITERIA:

Activity	**Percentages**
Various Assessments	35%
Class and Lab Work	35%
Homework	30%

TEXTBOOK: **Marine Biology: An Ecological Approach, 4th Edition**

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