

**CAPITAL COMMUNITY-TECHNICAL COLLEGE
HARTFORD**

SECTION I

SUBJECT AREA AND COURSE NUMBER: Science 103

COURSE TITLE: Introduction to Oceanography

CATALOG COURSE DESCRIPTION:

An introductory course in oceanography with a brief survey of the marine environment. The course will include geological, chemical, biological, and the physical aspects of the marine environment.

LECTURE HOURS PER WEEK: 3

PREREQUISITE: None

COURSE OBJECTIVES:

The course will serve as a science elective for students who are interested in the marine environment, but who do not have a strong background in physics, chemistry, or biology

SECTION II

1. COURSE CONTENT AND SCOPE:

A. OUTLINE OF TOPICS

1. Introduction to the Field of Oceanography: Scope of oceanography, some facts about the oceans, major uses of the oceans, and problems related to the study of the marine environment.
2. History of Oceanography: A brief introduction to the different ocean expeditions, the people involved, pioneers, man's love affair with the oceans, and the future of oceanography.

3. **Methods of Exploration of the Oceans:**
Equipments involved, problems with ocean sampling, techniques, and data collection.
4. **Geological Oceanography:** Origin of the oceans, structure of the ocean basins, oceanic sediments and their properties, theories of continental drift, sea-floor spreading, and global plate tectonic theory.
5. **Chemical Oceanography:** Chemical properties of sea water, salinity, temperature, density, dissolved minerals, gases, and organic substances.
6. **Biological Oceanography:** General features of life in the oceans, types and distribution of plankton, nekton, benthos, productivity and food chain.
7. **Physical Oceanography:** Physical properties of sea water, tides, heat budgets, up welling, and influence on weather modifications.
8. **Resources of the Ocean:** Food, oil, and minerals.
9. **Impingement of Man on the Oceans:** Present and future effects of the impact of man on the marine environment. Pollution, overfishing, coastal resource management, conservation practices, territorial limits, aquaculture, oil exploration, and future of marine transportation.

B. READING ASSIGNMENTS

See attached reading assignment schedule

C. WRITING ASSIGNMENTS

See attached schedule

2. METHODS OF EVALUATION :

Grading of the course is based on many factors, especially on three one hour examinations, one final examination, quizzes, and home work. Regular attendance and class participation will also be taken into consideration.

3. METHODS OF INSTRUCTION :

Regular lectures will be accompanied by slides and videos presentations. Depending on the availability of time and materials laser disc presentation and computer-assisted education format also will be used. The thrust of the course will be on student participation and discussion. If there is enough interest a field trip will also be arranged.

4. REQUIRED TEXTS AND SUPPLIES:

**Ross, D.A., 1988. INTRODUCTION TO OCEANOGRAPHY;
Prentice-Hall, New Jersey.**