**MET 2205 Oceanography (3CU)**

**Description**

This course provides an introduction to large scale circulation on the oceans and the impact of oceans on the global climate

**Objectives**

The course will help the students to achieve the following objectives

* Describe the different characteristics of the oceans
* Understand the relationship between ocean and atmospheric circulations

**Learning outcomes**

By the end of the course the student should be able to:

* Explain the basic characteristics of oceans
* Describe the interaction between the water bodies and the adjacent areas
* Describe how the oceans interact with the global climate

**Intellectual, Practical and transferable skills**

* Problem solving
* Analytical
* communication

**Teaching and learning patterns**

The mode of learning involves direct contact with students in form of lectures, Tutorials and assignments

**Indicative content**

* Physical and chemical properties of Oceans: Ocean basins, shore structure and shore processes.
* Sea water physical and chemical properties: Distribution of temperature, salinity and density.
* Ocean circulations: ocean currents, tides waves, tsunamis, turbulence, swells and storm surges.
* Quantification of the state of sea; the use of visibly, thermo cline, Sea surface temperature and other oceanic parameters.
* Land-air-sea interactions; Ocean influences on weather and climate: ENSO, upwelling and sinking.
* The Indian ocean; currents in the western Indian Ocean. Interaction with adjacent seas. changes in the physical, chemical and biological characteristics in the East coast of Africa.

**Assessment Method**

The assessment method is structured to include course work, and final examination. Course work consists of assignments, reports and tests and accounts for 30% of the final grade. The final examination will account for 70% of the final grading

**Core Reference materials**

# Alan Rabinowitz and Toby B. Sutton (1970): An environmental approach to marine science, *Oceanography Unlimited.*

# Richard A. Davis (1977): Principles of Oceanography, *Addison-Wesley Pub. Co*