

# **VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**

## ***S.Y.B.Sc. Marine Science (I.D.S.) Syllabus (New Course from June-2009)***

### ***Unit-I Scope of Marine Science***

- (1). Introduction to Marine Science & Career.**
- (2). Evolution & biological classification.**
- (3). Prokaryotes, Eukaryotes-Fungi, Protista, Plant, Animalia. Five kingdoms.**

### ***Unit-II Geology of the ocean***

- (1). Physical properties of ocean.**
- (2). Zonations of ocean.**
- (3). Formation of the ocean & shape of the ocean bottom.**
- (4). List of Indian oceans—Andaman sea, Arabian sea, Bay of Bengal, Gulf of Eden, Gulf of Oman, Mozambic channel, Parsian gulf, Red sea, Timor sea.**

### ***Unit-III Types of Seashores***

- (1). Sandy shore.**
- (2). Rocky shore.**
- (3). Estuaries.**

### ***Unit-IV Marine organisms***

- (A). Micro organisms : Phytoplanktons, Zooplanktons, Red algae, Brown algae, Green algae, Multicellular algae.  
Economic importance of algae.**
- (B). Macro organisms : Invertebrates—Commercial importance of marine Sponges, Molluscs, Arthropods (Crab & Prawns).  
Vertebrates : Economic importance of Scoliodon (Sharks) & Marine mammals.**

### ***Unit-V Marine Biology***

- (1). Adaptations : Bony fish surviving in near freezing water., Seabirds, Whales & their relations.**
- (2). Voyage of green sea turtle.**
- (3). General characters of Bony fishes & Cartilages fishes.**
- (4). Coral & Coral reefs : Types, Economic importance, Threats.**

### ***Unit-VI Marine pollution & Introduction to Aqua culture.***

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**REFERENCE BOOKS :**

- (1). **Fundamental of Ecology** : **Odum. E. P.**
- (2). **Marine Biology and Ecology** : **N. K. Pillai.**
- (3). **Fishes** : **Mary Chandi.**
- (4). **Fish and Fisheries of India** : **V. G. Jhingran.**
- (5). **Fish and Fisheries** : **Khanna.**
- (6). **Marine Fish-Farming for India** : **James Hornell.**
- (7). **Introduction to Marine Biology** : **Karleskint.**
- (8). **Marine Fisheries Extension** : **P. N. Ananth.**

**Websites :**

[www.org/jsp/student-prog.jsp](http://www.org/jsp/student-prog.jsp).  
[www.org.caluniv.ac.in](http://www.org.caluniv.ac.in)

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