

O CAN 1 – LECTURE TOPICS FOR MARINE BIOLOGY

Introductory biology

Biochemistry
Cells & cell structure
Kingdoms of life
Origin of life

Marine ecology

Ecosystems
Marine factors
Seawater chemistry
Marine zonation
Primary productivity
Energy flow
Symbioses
Population growth
El Niño Southern Oscillation

Bacteria & Protists

Kingdom Monera

Cyanobacteria
Photobacteria
Thermobacteria

Kingdom Protista

Protozoans
Dinoflagellates & diatoms
Plankton
Bioluminescence

Plants

Kingdom Plantae

Seaweeds
Green algae
Brown algae & kelp
Red algae
Flowering plants
Sea grasses
Mangroves
Photosynthesis

Animal behavior

Temperature regulation
Instincts vs. learned behavior
Swimming & diving
Social behavior
Sexual reproduction



Invertebrates

Kingdom Animalia

Sponges
Cnidarians
Flatworms
Roundworms
Molluscs
Segmented worms
Arthropods
Echinoderms
Chordates

Fishes

Superclass Pisces
Jawless fishes
Cartilaginous fishes
Bony fishes
Aquatic osmoregulation

Tetrapods

Superclass Tetrapoda
Marine reptiles
Pelagic birds
Marine mammals
Whales & dolphins
Seals & sea otters
Manatees

Marine habitats

Coastal habitats
Rocky intertidal zones
Sandy beaches
Kelp forests
Estuaries & salt marshes
Tropical habitats
Equatorial zone
Coral polyps & reefs
Mangroves
Deep-water habitats
Mid-water
Deep sea-floor
Hydrothermal vents