SUBJECT NO-NA61001, SUBJECT NAME- COASTAL ENGINEERING

LTP- 3-0-0,CRD- 3

SYLLABUS :-

Introduction to the coastal environment; Review of sea waves; Wave generation by wind and sea spectra; Storm surges and tsunami, Introduction to long waves; Nearshore wave transformation: shoaling, reflection, refraction, diffraction, breaking; wave run-up, wave overtopping. Wave dynamics in estuaries, energy dissipation by bottom friction and bed porosity. Near-shore mean motion: Wave setup, wave-induced currents (longshore and undertow). Basics of sediment transport and beach morphodynamics, Elements of coastal structures: types of coastal structures, forces on structures, stability of breakwaters; Climate change and its impacts on coastal environments. Introduction to coastal zone management.