GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 2

Civil Engineering (Computer Aided Structural Analysis & Design)

Subject Name Marine Structures (Major Elective - III)

Sr. No	Course content
1.	Wave Mechanics: Wave generation process, small and finite amplitude wave theories.
2.	Wind forces: Wave forces on vertical, inclined cylinders, structures - current forces and use of Morison equation.
3.	Different types of offshore structures, foundation modelling, structural modelling, Static method of analysis, Foundation analysis, Dynamics analysis of offshore structures, Design of platforms, Jacket tower and mooring cables and pipe lines.

Reference Books :

1. Hydrodynamics of Offshore Structures - Chakrabarti, S.K. Computational Mechanics Publications, 1987.
2. Offshore Structural Engineering - Thomas H. Dawson, Prentice Hall Inc Englewood Cliffs, N.J. 1983
3. Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms - API, American Petroleum Institute Dalls, Tex. Publication, RP2A,
4. Oceanographical Engineering - Wiegel, R.L., Prentice Hall Inc, Englewood Cliffs, N.J. 1964.
5. Dynamic Analysis of Offshore Structures, - Brebia, C.A.Walker, S., New-nes Butterworths, U.K. 1979.
6. Offshore Structures, Vol.1, - Reddy, D.V. and Arockiasamy, M., Krieger Publishing Company, Malabar,
7. Florida, 1991.