

Course Name:

Water Wave Mechanics

Course Number:

20892

Credit:

3

Course Content (outline):

- Introduction to wave mechanics
- Review of hydrodynamics and vector analysis
- Small amplitude theory
- Wave characteristics
- Long waves
- Wave-maker theory
- Wave spectrum
- Wave forces
- Wave on real seabed
- Nonlinear waves
- Laboratory works on waves

References:

- “Water wave mechanics for engineers and scientists”, R.G. Dean & R.A. Dalrymple (1984).
- “Water Wave Mechanics”, B. Ataie-Ashtiani & A.A. Beheshti, Amir-Kabir UP, pp.305 (1385).
- “Coastal Hydrodynamics”, B. Ataie-Ashtiani & A. Najafi-Jillani, Amir-Kabir UP, pp.655, (1384).