

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. SEMESTER: V

MARINE ENGINEERING

Subject Name: **Seamanship and Elementary Navigation**

Subject Code: **151803**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
3	0	2	5	70	30	50

Sr. No.	Course Content
1.	<p>Seamen & their duties:</p> <p>Ship's Department, General ship knowledge and nautical terms like Poop-Deck, Forecastle, Bridge etc.</p>
2.	<p>Deck Equipment:</p> <p>Windlass, Derricks Cranes, Gypsy, Capstan, Hatches, and their function.</p>
3.	<p>Navigational Lights and Signals:</p> <p>Port and Starboard and aft mast light, Colours and Location; Look out, Precautions and Bad weather, Flags used on ships, Flag etiquette, Morse and Semaphore signaling, Sound signals.</p>
4.	<p>Rope Knots and Moorings:</p> <p>Types of knots. Practice of knot formation, Materials of ropes, Strength, Care and maintenance, use of mooring line, heaving line, Rat guards, Canvas and its use.</p>
5.	<p>Anchors:</p> <p>Their use, Dropping and Weighing anchor, Cable stopper.</p>
6.	<p>Navigation:</p> <p>General knowledge of principle stars. Sextant, Navigation compasses, Echo Sounder, Log and uses, barometer and weather classification, G.M.T. and Zonal time, wireless Navigational Instruments, radar satellite Navigation etc.</p>

7.	<p>Life boats & Life rafts:</p> <p>Construction, equipment carried, carrying capacity. Davits and their operation, Launching of Life rafts (Inflatable type). Embarkation into lifeboat and Life raft. Survival pack, Stowage and securing arrangement.</p>
8.	<p>Practical Aspects:</p> <p>Knots, bends and hitches, Ropes splice, Donning of Life jackets life boat drills. Lowering & hoisting of life boats(model).</p>

Reference Books:

1. The theory and practice of seamanship, 11th Edition by Graham Danton, Routledge, Newyork, USA and Canada, 1996.
2. Seamanship Primer, 7th Edition by Capt. J. Dinger, Bhandarkar Publications, Mumbai 1998.
3. The Annapolis Book of Seamanship by Rousmaniere John; Simon and Schuster, Rockefeller Centre, 1230 Avenue of Americas, New York
4. Seamanship and Nautical knowledge, 27th Edition y A.N. Cockcroft, Brown son & Ferguson Ltd., Glasgow 1997.