***SUBJECT NO-NA31004, SUBJECT NAME- CAD-CAM MARINE DESIGN***

***LTP- 3-0-0,CRD- 3***

**SYLLABUS :-**

**Introduction; Engineering CAD systems; Curve representation, analytical and parametric representation of curves; Differential geometry of curves; Interpolation techniques, control polygon techniques (Bezier, BSpline, NURBC); Curve generation; Ship curve design; Interrogation and fairing techniques for curves; Surface representation, analytical and parametric representation of surfaces; Differential geometry of surfaces; Surface interpolation techniques, control polygon techniques (Bezier, BSpline, NURBS); Surface generation; Interrogation and fairing techniques for surfaces; Ship surface design, ruled surface, developable surface, low curvature surfaces; Optimisation methods in ship design; Multicriteria decision making methods in ship design/production; Optimisation methods in design, classical optimization, multi-variable optimization, non-linear optimisation methods, stochastic methods (Simulated annealing and Genetic algorithm).**